

Meridian Mail Compact Option

System Administration Guide

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Contents

- | | |
|-----------|---|
| 1 | About this guide |
| 2 | Navigating through system administration |
| 3 | Logging on |
| 4 | Setting up the system |
| 5 | Making voice recordings |
| 6 | Setting up Meridian Mail Compact Option security |
| 7 | User administration—an overview |
| 8 | Local voice users |
| 9 | Remote voice users |
| 10 | Directory entry users |
| 11 | Distribution lists |
| 12 | General administration—an overview |
| 13 | General options |

14	Volume administration
15	Back up and restore Meridian Mail Compact Option data
16	Dialing translations
17	Routine maintenance
18	Voice administration—an overview
19	Voice messaging options
20	Display options
21	Finding and printing VSDNs and service definitions
22	Configuring Meridian Mail Compact Option services
23	The VSDN table
24	Voice services profile
25	Class of Service administration
26	Hardware administration

27	System status and maintenance
28	SEERs and Alarms
29	Operational Measurements
30	Operational Measurements traffic reports
31	User Usage reports
32	Bulk provisioning
A	Integrated Mailbox Administration

Chapter 26

Hardware administration

In this chapter

<u>Overview</u>	<u>26-2</u>
<u>The Hardware Administration menu</u>	<u>26-3</u>
<u>Section A: Viewing the node configuration</u>	<u>26-5</u>
<u>Section B: Viewing the data port configuration</u>	<u>26-15</u>

Overview

Introduction

The Hardware Administration screens allow you to view the contents of the hardware database in your Meridian Mail Compact Option system. The hardware database is a system utility that maintains a current listing and description of the node, cards, and ports in your Meridian Mail Compact Option system.



CAUTION

Risk of audit failure

Do not leave any Hardware Administration menu on the administrative console overnight, as important system audits may fail due to lack of available memory, and there will be a security risk.

Modifying the hardware database

The Hardware Administration function allows you to view aspects of the Hardware database. If you or a representative from your support organization need to modify the hardware database, you must use the “Modify hardware” tool. Refer to *System Administration Tools* (NTP 555-7001-305).

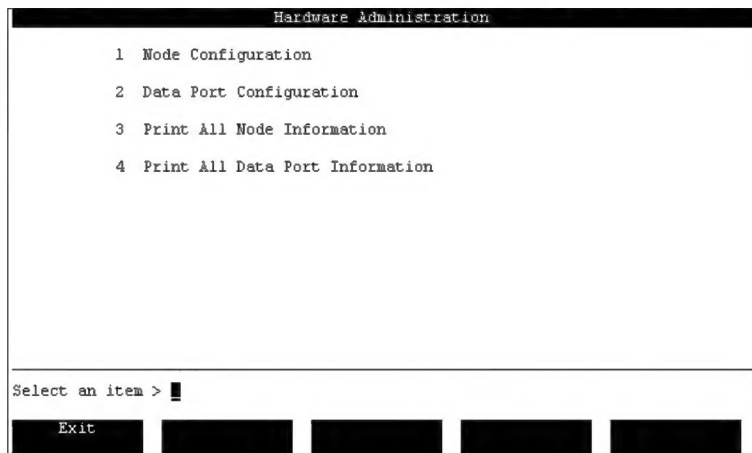
The Hardware Administration menu

Introduction

The Hardware Administration menu is accessed directly from the main System Administration menu.

Hardware Administration menu

The Hardware Administration menu is displayed in the following screen.



The screenshot shows a terminal window titled "Hardware Administration". Inside the window, there is a list of four menu items:

- 1 Node Configuration
- 2 Data Port Configuration
- 3 Print All Node Information
- 4 Print All Data Port Information

Below the list, there is a prompt "Select an item >" followed by a cursor. At the bottom of the window, there is a row of five buttons. The first button is labeled "Exit". The other four buttons are unlabeled.

Procedure

To access the Hardware Administration facilities, follow these steps.

Starting Point: The Main Menu

Step Action

- 1 Select Hardware Administration.
Result: The Hardware Administration menu appears.
 - 2 Choose the number of the action you wish to perform and press <Return>.
Result: The screen corresponding to your selection appears.
See the following sections for details:
[See "The Node Configuration screen" on page 26-7.](#)
[See "The Data Port Configuration screen" on page 26-18.](#)
 - 3 Press [Exit] to return to the Main Menu.
-

Section A **Viewing the node configuration**

In this section

<u>Overview</u>	<u>26-6</u>
<u>The Node Configuration screen</u>	<u>26-7</u>
<u>The View Node screen</u>	<u>26-10</u>

Overview

Introduction

The Node Configuration screen provides a summary listing of the cards found in all nodes in your system ([see “The Node Configuration screen” on page 26-7](#)).

The View Node screens provide a more detailed view of individual nodes ([see “The View Node screen” on page 26-10](#)).

The Node Configuration screen

Introduction

The Node Configuration screen is used to view a summary listing of the cards in the node on your Meridian Mail Compact Option system.

Accessing the Node Configuration screen

To view the Node Configuration screen, follow these steps.

Step	Action
------	--------

- | | |
|---|---|
| 1 | Select Hardware Administration from the Main Menu.
Result: The Hardware Administration menu appears. |
| 2 | Select Node Configuration from the Hardware Administration menu.
Result: The Node Configuration screen appears. |

The screen

The following illustration shows a Node Configuration screen for an Meridian Mail Compact Option system.

Note: The illustrations in this section do not necessarily represent the hardware configuration on your system. They are examples only.

Hardware Administration			
Node Configuration			
Node	Card_1	Card_2	Card_3
1	SBC	DVP4	Empty

Move the cursor to the node number and press the space bar to select.

Exit		View		
------	--	------	--	--

Field descriptions

The following fields appear on the Node Configuration screen.

Node

Description	Refers to the node within the configuration.
Default	None.

Card_x

Description	Identifies the card slot in the defined node, where “x” represents the position of the card slot. The card slots are numbered from left to right.
Valid entries	The possible card types are listed here. Depending on your system type, you will not see all of these cards on your system. - SBC - DVP4

The View Node screen

Introduction	The View Node screen provides a detailed view of the cards and ports that make up a node, including card types and locations, port types, and port attributes.
MSP nodes	The MSP node is always node 1 on your system. It contains system-related cards such as SBC and DVP4.
Viewing node configurations	To view the node configurations for your system, follow these steps.

Step	Action
------	--------

- | | |
|---|---|
| 1 | Select Hardware Administration from the Main Menu.
Result: The Hardware Administration menu appears. |
| 2 | Select Node Configuration from the Hardware Administration menu.
Result: The Node Configuration screen appears. |
| 3 | Move the cursor to the node you want to view and press <Spacebar>.
Result: Your selection is highlighted. |
| 4 | Select [View] to view the configuration information for the highlighted node.
Result: The View Node screen appears. see “View Node screen (MSP node)” on page 26-11 and for examples. |
| 5 | Select [Exit] to return to the Node Configuration screen when you have finished viewing the node configuration. Select [Exit] again to return to the Hardware Administration main menu. |

**View Node screen
(MSP node)**

The following diagram illustrates the View Node screen for the Meridian Mail Compact Option system when the node is an MSP node.

```

Hardware Administration
View Node 1 (C=Card D=DSP P=Port)

C-D-P      Card_Type  Port_Type  Attributes

1
1  1        SBC
      Data:      Terminal Printer NWModem MMLink AML/CSL SMDI PMS
                  AdminPlus LIFNLink Modem
1  2        Data:      Terminal Printer NWModem MMLink AML/CSL SMDI PMS
                  AdminPlus LIFNLink Modem
1  3        Data:      Terminal Printer NWModem MMLink AML/CSL SMDI PMS
                  AdminPlus LIFNLink Modem

2
2-1-1      DVP4
      Voice:     TN: Octal  10 -0      AgtPosId: 9999
2-1-2      Voice:     TN: Octal  10 -8      AgtPosId: 9999
2-2-1      Voice:     TN: Octal  10 -1      AgtPosId: 9999
2-2-2      Voice:     TN: Octal  10 -9      AgtPosId: 9999

Select a softkey >
Exit
  
```

Field descriptions

The View Node screens display the following read-only information about each card on the node:

C-D-P

Description	This is the physical location of the port in the Meridian Mail Compact Option system, where • C is the card. • D is the DSP number (which is displayed for voice processor cards only). • P is the port number.
-------------	--

Card_Type

Description	This indicates the function of the card.
Valid entries	The possible card types are listed here. Depending on your system type, you will not see all of these cards on your system. - SBC - DVP4

Port_Type

Description	This field describes the type of port, where • Data indicates a serial data communications port • Voice indicates a voice processor port
-------------	--

Attributes (for ports with type = Data)

Description	• Terminal indicates a connection to an administration terminal or a diagnostic port. • AML/CSL (Meridian Link) indicates there is a communications channel between Meridian Mail Compact Option and the Option11C Compact.
-------------	--

Attributes (for ports with type = Voice or Multi)

Description	• TN (Option11C Compact) This stands for Terminal Number <Density + Address> where Density is Octal. The Address consists of the set of numbers c-uu, where: c = card (10) uu = unit • AgtPosId indicates the Agent Position ID for the voice port. This is equivalent to the Position ID for the virtual agent. It is unique across the entire Option11C Compact customer and is associated with a particular (agent) telephone set. It is not necessary to fill in this field, but you may want to use this field to further label and track your ports. The default value is 9999.
-------------	---

Section B **Viewing the data port configuration**

In this section

<u>Overview</u>	<u>26-16</u>
<u>The Data Port Configuration screen</u>	<u>26-18</u>
<u>Viewing data ports</u>	<u>26-21</u>
<u>View Terminal data ports</u>	<u>26-23</u>

Overview

Introduction

The Data Port Configuration screen summarizes the data ports on all nodes in your system. From this screen, you can select and view data port configurations for devices that are part of your system.

To modify any other data port (except AML/CSL), use “Modify hardware” at the Tools level. See *System Administration Tools* (NTP 555-7001-305).

**Recommended data
port uses for Meridian
Mail Compact Option
systems**

The following table describes the recommended data port uses for Meridian Mail Compact Option systems.

Port	Allowable uses
Node 1, Port 1	Terminal/Console hookup
Node 1, Port 2	Connection to switch
Node 1,Port 3	Diagnostic port

The Data Port Configuration screen

Introduction

The Data Port Configuration screen summarizes the data ports on all nodes in your system. You can select and view the data port configurations for only those devices that are part of your system.

Accessing the Data Port Configuration screen

To view the Data Port Configuration screen, follow these steps.

Step	Action
------	--------

1	Select Hardware Administration from the Main Menu.
---	--

	Result: The Hardware Administration menu appears.
--	--

2	Select Data Port Configuration from the Hardware Administration menu.
---	---

	Result: The Data Port Configuration screen appears.
--	--

The screen

The following illustration shows the Data Port Configuration screen for an Meridian Mail Compact Option system.

Hardware Administration			
Data Port Configuration			
Port Location	Description	Device Type	Status
1-1-1	Node 1 SBC Port 1	Terminal	InService
1-1-2	Node 1 SBC Port 2	AML/CSL	InService
1-1-3	Node 1 SBC Port 3	Terminal	InService

Move the cursor to the data port location and press the space bar to select.

Exit View/Modify

Field descriptions

The Data Port Configuration screen displays the following information

Port Location

Description	This is the physical location of the port in the Meridian Mail Compact Option system (node-card-port).
-------------	--

Description

Description	This field identifies the node, card type and the port.
-------------	---

Device Type

Description	This field identifies the function of the port.
-------------	---

Valid values	See the data port tables in the “Overview” on page 26-16.
--------------	---

Status

Description	This field identifies the current operational state of the port.
-------------	--

Valid values	The status will be one of the following:
--------------	--

InService

The data port is operational.

OutOfService

The data port is no longer operational because the node has been disabled.

Faulty

The system has detected an error in the data port.

Unequipped

The data port has not been defined in the hardware database.

Viewing data ports

Introduction

This section describes the different data port screens that can be displayed. Depending on the device type that has been selected when you press View/Modify, the appropriate version of the View Data Port screen appears as follows:

- Terminal data ports
- Diagnostic port

Procedure

To view data ports, follow these steps.

Step Action

- 1 Select "Hardware Administration" from the Main Menu.
Result: The Hardware Administration menu appears.
 - 2 Select Data Port Configuration from the Hardware Administration menu.
Result: The Data Port Configuration screen appears.
 - 3 Move the cursor to the port you want to view and press <Space Bar>.
Result: Your selection is highlighted.
 - 4 Select [View/Modify] to view the configuration information for the highlighted port.
Result: The View Node screen appears for the selected device. For further information, see the appropriate section for the selected device, as follows:
["View Terminal data ports" on page 26-23](#)
["on page 26-26](#)
[" on page 26-26](#)
 - 5 Select [Exit] to return to the Data Port Configuration screen when you have finished viewing the data port configuration. Select [Exit] again to return to the Hardware Administration screen.
Result: The "Hardware Administration" screen is redisplayed.
-

View Terminal data ports

View Data Port screen—Console

The View Data Port screen for terminals (Console) allows you to view information about the terminal connected to the selected port.

```

Hardware Administration
View Data Port
Data Port Location:  1-1-3
Device Type:        Terminal
Device Name:        DIAGNOSTIC
Baud Rate:          1200 █ 400 4800 9600
Parity:             Even Odd None
Number of Windows:  1
Window Width:       1
Window Height:      1

Select a softkey >
Exit
  
```

Field descriptions

The View Data Port screens display the following read-only information about the terminals connected to the device type.

Data Port Location

Description	This is the physical location of the port (node-card-port).
Valid entries	A terminal must be located on port 1 of node 1.

Device Type

Description	This field describes the device type.
Valid entries	“Terminal” is displayed.

Device Name

Description	This is the name that identifies the terminal. This name is assigned by the system when Meridian Mail Compact Option is installed, or when the port is reconfigured using the Install/data tape. The Device Name for a terminal data port can also be modified later using the “Modify hardware” tool.
-------------	--

Baud Rate

Description	The selected baud rate is highlighted.
Valid entries	For Meridian Mail Compact Option systems, 2400 is recommended, but it must match the baud rate set on the switch.

Parity

Description	This is the method by which data is communicated.
Valid entries	This can be set to Even, Odd, or None, depending on the current setup of the terminal connected to the port. It is usually set to None.

Number of Windows

Description	This field specifies the number of windows that can be used simultaneously.
Valid entries	Set this field to 6 for the system administration terminal.

Window Width

Description	This field specifies the window width used.
Valid entries	Set this field to 80 for the terminal.

Window Height

Description	This field specifies the window height used.
Valid entries	Set this field to 24 for the terminal.

Chapter 27

System status and maintenance

In this chapter

<u>Overview</u>	<u>27-2</u>
<u>What is system status and maintenance?</u>	<u>27-3</u>
<u>Section A: System Status</u>	<u>27-5</u>
<u>Section B: Card Status</u>	<u>27-19</u>
<u>Section C: DSP Port Status</u>	<u>27-29</u>
<u>Section D: Channel Allocation Table</u>	<u>27-45</u>
<u>Section E: Disk Maintenance</u>	<u>27-57</u>
<u>Section F: Diagnostic Schedules</u>	<u>27-67</u>

Overview

Introduction

The System Status and Maintenance function provides monitoring and control screens through which you can obtain views of the operational state of the system at four levels:

- system
- card
- DSP port
- disk

The System Status and Maintenance functions are used in the course of routine maintenance, and allow you to take any component of the system out of service for maintenance. It also allows you to perform diagnostics on selected components and schedule regular diagnostic activities.

A component can be taken out of service by disabling it (forcing it out of its operational state), or by performing a courtesy disable, which progressively disables active DSP ports as they become idle. The Courtesy Disable function available within System Status and Maintenance avoids any disruption of calls in progress.

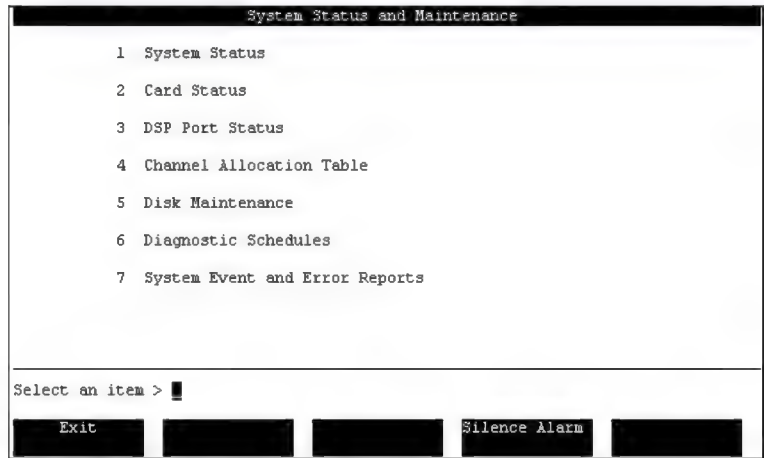
See Also

For help in developing a regular maintenance routine that includes System Status and Maintenance functions, see Chapter 17, "Routine maintenance".

What is system status and maintenance?

System Status and Maintenance menu

When you select System Status and Maintenance from the Main Menu, this menu is displayed.



Types of tasks

A variety of tasks can be performed from this menu. The types of tasks are as follows.

System courtesy down

Take this action for broad maintenance activities, such as reconfiguring the Option 11C Compact, which requires powering down Meridian Mail Compact Option.

Courtesy disable ports or (forced) disable nodes

Take this action to disable all ports on a node. This is necessary to put certain cards out of service if they need to be replaced or if diagnostics need to be run.

Card disable

Take this action before performing diagnostics on an in-service card.

Courtesy disable or (forced) disable of DSP ports

Take this action before performing tests on a DSP port.

Channel Allocation Table modification

When you move agents from one queue to another (in order to dedicate them to a particular service), you must also modify the Channel Allocation Table to show this change.

Disk maintenance

This selection allows you to view the state of the hard disk and run disk diagnostics.

Schedule diagnostic activities

This action provides a means of scheduling voice path diagnostics for a Meridian Mail Compact Option system.

System Events and Error Reports

This allows you to set various System Error and Event Reporting options. For details, [see Chapter 28, "SEERs and Alarms"](#).

Section A **System Status**

In this section

<u>Overview</u>	<u>27-6</u>
<u>The System Status screen</u>	<u>27-8</u>
<u>Disabling/activating the system ("Courtesy Down")</u>	<u>27-16</u>

Overview

Introduction

The System Status screen allows you to view the operational status of the system, change the status of nodes, courtesy disable the system, or courtesy disable ports on individual nodes.

This screen is identical to the System Status screen displayed from the Logon screen, except that this screen has more softkeys available which allow you to perform specific maintenance tasks.

When to use this feature

The System Status functions can be used to

- check the status of your system if you suspect that your system is not performing properly
- disable the system DSP ports to perform routine maintenance or diagnostics

System not performing properly

You may suspect a problem in your system if

- callers are unable to get through to users' mailboxes to leave a message
- users are unable to access Meridian Mail Compact Option (phone rings, but Meridian Mail Compact Option never picks up)
- the call must ring several times before the call is transferred to Meridian Mail Compact Option

The above scenarios suggest that one of the following may be true:

- not enough channels are idle to handle the current demand
- parts of the system are faulty (the AML link, a node, or DSP port, for example)

Checking system status

Check the System Status screen to determine if callers or users are unable to get through to Meridian Mail Compact Option because all channels are busy (active), or because parts of the system are faulty or disabled.

The System Status screen

Introduction

This section describes the System Status screen.

The System Status screen that you access from the System Status and Maintenance menu provides the following functions:

- Courtesy Down System/Activate System ([see “Disabling/activating the system \(“Courtesy Down”\)” on page 27-16](#))

How to reach the screen—two ways

There are two ways to reach two different versions of the System Status screen: from the Main Menu and from the Logon/Status screen.

From the Main Menu

To reach the System Status screen from the Main Menu, follow these steps.

Starting Point: The Main Menu

Step Action

- 1 Select System Status and Maintenance.
Result: The System Status and Maintenance menu is displayed.
- 2 Select System Status.
Result: The System Status screen is displayed.

System Status and Maintenance										
System Status: InService				Alarm Status: Critical=Off Major=On Minor=On						
Last Event: 66-11 Disk 0 is still down				6/10 12:08						
Link Status: 1-7-2: InService										
Node	Type	Status	DSP Port Status						Storage Used	
			Active	Idle	OutSv	Faulty	Pending	Others	Voice	Text
1	MSP	InService								
2	SPN	InService	0	24	0	0	0	0	0%	1%
3	SPN	InService	0	24	0	0	0	0	0%	1%
4	SPN	InService	0	24	0	0	0	0	0%	1%

Select a softkey >										
Exit	Enable Node	Disable Node	Courtesy Disable Ports	Courtesy Down System						

From the Logon/Status screen

To reach an abbreviated version of the System Status Screen from the Logon/Status screen, follow these steps.

Starting Point: The Logon/Status screen

Step Action

- 1 Press the [System Status] softkey.
Result: The System Status screen is displayed.

```

System Status and Maintenance
System Status: Loading           Alarm Status: Critical=Off Major=Off Minor=On
Last Event:   11-50 VS1 Stale File Version: root=23360 Read Client RT11/16 15:05
Link Status:  1-1-2: InService

Node  Type  Status      Active Idle OutSv Faulty Pending Others  Storage Used
 1    MSP  InService      0     0    0     0     0     0     4     Voice Text
                               7%  54%
```

Select a softkey >

Exit [] [] [] []

Note: You will not be able to access the maintenance softkeys from this version of the screen.

Field descriptions

The following fields appear on the System Status screen.

System Status

Description	This field displays the current system status.
Possible status types	There are four possible status types. InService This indicates the system is running. CourtesyPending This indicates that the system is in the process of shutting down. This appears after using the [Courtesy Down System] softkey. Incoming calls are directed to an attendant. Calls in progress are not interrupted. Each DSP port is courtesy disabled as it becomes idle. The software remains loaded. CourtesyDown This indicates that the system has shut down and is no longer operational or accepting calls, but the software remains loaded. When the system is down, the [Courtesy Down System] softkey becomes [Activate System]. When the [Activate System] softkey is used, the system restarts. Loading This indicates the system is loading software during bootup.

Alarm Status

Description	This indicates the state of each of the types of alarms described below.
Alarm types	There are three possible alarm types. Critical These alarms indicate a service-affecting problem that requires immediate attention. Major These alarms indicate a service-threatening problem that may be allowed to persist for up to 24 hours. If not attended to, the alarm could become critical. Minor These alarms indicate a problem that has no impact on the system or users. For more details, see Chapter 28, "SEERs and Alarms".
Alarm states	Each alarm type can be in one of the following states. Off This state indicates that there are no new alarms. This does not necessarily mean that there are no error conditions. On This status indicates that one or more alarm situations were detected. Unk This indicates that the status is unknown.

Last Event

Description	This is the most recent system event or error report (SEER) logged.
-------------	---

Link Status

Description	This is the state of the AML link to the Option11C Compact.
-------------	---

Link states	The link can be in one of the following states: InService This indicates that the link is operational. Faulty This state indicates that a hardware problem exists but that the data port remains operational.
Node	
Description	This is the node number.
Type	
Description	This is the type of node.
Status	
Description	This is the status of the node in your system. <i>Note:</i> The status at this level does not indicate the status of a given card on the node. For information on cards, see “The Card Status screen” on page 27-21.

Node states	InService This state indicates that the node is operational. Unequipped This indicates that the node has not been defined in the hardware database. Refer to <i>System Administration Tools</i> (NTP 555-7001-305) for instructions on modifying the hardware database. Faulty This indicates that a hardware problem was detected or a critical program on the node is not operational. OutOfService This indicates that the node is no longer operational as a result of a forced disable. Loading This state indicates that the node is currently starting up and loading software into memory. ShuttingDown This state indicates that the node is being put out of service. Booting This indicates that the operating system is being loaded on the node.
-------------	---

DSP Port Status

Description	These fields reflect the state of each DSP port on the associated node. For each DSP port that is in a particular state, an entry is made in the appropriate column.
DSP States	A DSP port may be in one of the following states. Active This indicates that the DSP port is operational and is currently in use. Idle This indicates that the DSP port is operational but not in use at the moment. The DSP port is ready to accept calls. OutSv This state indicates that the associated DSP port is not operational, as a result of a courtesy disable or forced disable. Faulty This state indicates that an error has been detected in the DSP port. Pending This state indicates that there has been a request to either shut down or restart the DSP port. The port is in the process of either shutting down or restarting. Others This state indicates that the DSP port is temporarily unavailable. This usually occurs while the system is booting up. The status remains as “Others” while the software is loading. Once fully loaded, the status becomes “Active” or “Idle.” The status may also appear as “Others” when you reenable a port (for as long as the necessary software is loading). The status returns to “Idle” once the port has been enabled.

Storage Used

Description	These fields indicate the amount of voice and text storage used as a percentage of available storage on the user volume of this node. (If the disk on a node is bad, percentages are not displayed.)
-------------	--

Disabling/activating the system (“Courtesy Down”)

Introduction

Use Courtesy Down for broad maintenance activities, such as reconfiguring the Option1 IC Compact, which requires powering down Meridian Mail Compact Option.

During a Courtesy Down, incoming calls are directed to an attendant. Calls in progress are not interrupted. Each DSP port is courtesy disabled as it becomes idle. The software remains loaded. This prevents Meridian Mail Compact Option users from being suddenly disconnected from their voicemail session.

Procedure

These steps describe how to Courtesy Down the Meridian Mail Compact Option system, and reenable the system after a Courtesy Down.

Starting Point: The System Status screen

Step Action

- 1 Press [Courtesy Down System].
Result: You are prompted as to whether you want to Courtesy Down the system.
- 2 Press the up arrow until **Yes** appears as the response and press return.
Result: The [Activate System] softkey replaces the [Courtesy Down System] softkey.
It may take some time to disable the system since all active DSP ports must first become idle.
- 3 After the system reaches CourtesyDown state, are all DSP ports now in the “OutSv” or “Others” columns?
 - If yes, go to [step 4](#).
 - If no, disable the DSP ports manually according to the steps in [“Disabling/enabling DSP ports in single mode” on page 27-40](#) or [“Disabling/enabling DSP ports in range mode” on page 27-42](#), then go to [step 4](#).

Step Action

- 4 Perform the required maintenance activities.
 - 5 Reenable the system by pressing [Activate System].
Note: The system can be reenabled at any time during the Courtesy Down process.
 - 6 After the system returns to "InService" status, are all DSP ports either Idle or Active?
 - If all DSP ports are Idle or Active, press [Exit].
 - If some DSP ports are in the OutSv or Others columns, reenable the DSP ports manually according to the steps in ["Disabling/enabling DSP ports in single mode" on page 27-40](#) or ["Disabling/enabling DSP ports in range mode" on page 27-42](#), then press [Exit].
-

Section B **Card Status**

In this section

<u>Overview</u>	<u>27-20</u>
<u>The Card Status screen</u>	<u>27-21</u>
<u>Enabling/disabling cards</u>	<u>27-26</u>
<u>Running out-of-service diagnostics</u>	<u>27-27</u>

Overview

Introduction

The Card Status option on the System Status and Maintenance menu allows you to check the status of the cards on your system, and run out-of-service diagnostics on a disabled or faulty card.

When to use this feature

The Card Status screen can be used to

- check the status of the cards in your system if you suspect that your system is not performing properly ([see “The Card Status screen” on page 27-21](#))

The Card Status screen will show you if any of the cards are faulty or disabled. If a card is faulty or disabled, perform a diagnostic check on the card ([see “Running out-of-service diagnostics” on page 27-27](#)).

- perform a diagnostic check on a card that you suspect is not working properly, or on a new card that has just been installed in your system ([see “Running out-of-service diagnostics” on page 27-27](#))

The Card Status screen

Introduction

The Card Status screen displays the operational status of the cards in your system. The enable/disable softkeys displayed on this screen are used to enable and disable voice processor cards only.

If you suspect a problem with your system hardware, you can use this screen to check that all the cards on a node are functioning properly. You can also run diagnostics on a card from the Card Status screen.

Before running diagnostics on a card, you must first disable it. See [“Enabling/disabling cards” on page 27-26.](#)

How to reach the screen

Starting Point: The Main Menu

Step	Action
1	Select System Status and Maintenance. Result: The System Status and Maintenance menu is displayed.
2	Select Card Status Result: The Card Status screen is displayed

Card status screen The types of cards that appear for Meridian Mail Compact Option in the Card Status screen below are described in the section [“Field descriptions” on page 27-23.](#)

System Status and Maintenance

Card Status for Node 1

System Status: Loading Alarm Status: Critical=Off Major=Off Minor=On

Card#	Location	Description	Status
1	1-1-0	Enhanced Single Board Computer	InService
2	1-2-0	Digital Voice Card	InService
3	1-3-0	Empty	Unequipped

Select a softkey >

Exit

Enable Card

Disable Card

OutOfService
Diagnostics

Field descriptions

The following fields appear on the Card Status screen.

System Status

Description	This field displays the current system status.
Possible status types	There are four possible status types. InService This indicates the system is running. CourtesyPending This indicates that the system is in the process of shutting down. CourtesyDown This indicates that the system has shut down and is no longer operational or accepting calls. Loading This indicates the system is loading software during bootup.

Alarm Status

Description	This indicates the state of each of the types of alarms described below.
Alarm types	There are three possible alarm types. Critical These alarms indicate a service-affecting problem that requires immediate attention. Major These alarms indicate a service-threatening problem that may be allowed to persist for up to 24 hours. If not attended to, the alarm could become critical. Minor These alarms indicate a problem that has no impact on the system or users. For more details, see Chapter 28, "SEERs and Alarms".

Alarm states	Each alarm type can be in one of the following states. Off This state indicates that there are no new alarms. This does not necessary mean that there are no error conditions. On This status indicates that one or more alarm situations were detected. Unk This indicates that the status is unknown.
Card #	
Description	This is the number of each card in the node.
Location	
Description	This is the physical location (Node-Card-Port) of each card in the selected node.
Description	
Description	This is the type of card at that location.
Valid entries	The possible card types are listed here. • SBC • DVP4

Status	
Description	This is the current state of each card on the selected node.
Card states	InService This state indicates that the card is operational. Faulty This state indicates that a hardware problem has been detected for the card. Unequipped This state may indicate one of two conditions: (a) the card slot is empty but a card is defined as being in that location in the hardware database or (b) the card is in the slot but is not defined in the hardware database. OutOfService This state indicates that the card has been disabled.

Enabling/disabling cards

Introduction

Only voice processor cards can be disabled from the Card Status screen.

Procedure

Starting Point: The Card Status screen

Step	Action
1	Press [Disable Card]. Result: You are prompted for the number of the card you wish to disable. Note: You can only disable voice processor cards from this screen.
2	Enter the number of the card followed by <Return>. Result: The system may take some time disabling the card. The message "WORKING..." will be displayed during this interval. The card is disabled when its status changes to "OutOfService".
3	Perform diagnostics on the card as described in "Running out-of-service diagnostics" on page 27-27 .
4	Press [Enable Card]. Result: You are prompted for the number of an out-of-service card.
5	Enter the number of an out-of-service card followed by <Return>. Result: The system may take some time enabling the card. The message "WORKING..." will be displayed during this interval. The card is enabled when its status changes to "InService".

Running out-of-service diagnostics

Introduction If you suspect a card is faulty, run out-of-service diagnostics on the card. If the test shows the card is faulty, it is assigned a “Faulty” status which can be observed on the Card Status screen.

Procedure	Starting Point: The Card Status screen								
	<table> <tr> <th data-bbox="480 496 538 524">Step</th><th data-bbox="544 496 1192 524">Action</th></tr> </table>	Step	Action						
Step	Action								
	<table> <tr> <td data-bbox="480 545 538 573">1</td><td data-bbox="544 545 1192 669"> Are you running out-of-service diagnostics on a voice processor card? If yes, disable the voice processor card according to the instructions in “Enabling/disabling cards” on page 27-26. </td></tr> </table>	1	Are you running out-of-service diagnostics on a voice processor card? If yes, disable the voice processor card according to the instructions in “Enabling/disabling cards” on page 27-26.						
1	Are you running out-of-service diagnostics on a voice processor card? If yes, disable the voice processor card according to the instructions in “Enabling/disabling cards” on page 27-26.								
	<table> <tr> <td data-bbox="480 690 538 717">2</td><td data-bbox="544 690 1192 781"> Press [OutOfService Diagnostics]. Result: You are prompted for the number of an out-of-service card. </td></tr> </table>	2	Press [OutOfService Diagnostics]. Result: You are prompted for the number of an out-of-service card.						
2	Press [OutOfService Diagnostics]. Result: You are prompted for the number of an out-of-service card.								
	<table> <tr> <td data-bbox="480 802 538 829">3</td><td data-bbox="544 802 1192 925"> Enter the card number followed by <Return>. Result: The message “WORKING...” will be displayed while diagnostics are running. When diagnostics are completed, the result is displayed in a screen message. </td></tr> </table>	3	Enter the card number followed by <Return>. Result: The message “WORKING...” will be displayed while diagnostics are running. When diagnostics are completed, the result is displayed in a screen message.						
3	Enter the card number followed by <Return>. Result: The message “WORKING...” will be displayed while diagnostics are running. When diagnostics are completed, the result is displayed in a screen message.								
	<table> <tr> <th data-bbox="480 946 795 974">IF diagnostics</th><th data-bbox="802 946 1192 974">THEN</th></tr> <tr> <td data-bbox="480 982 795 1198">fail</td><td data-bbox="802 982 1192 1198">the card status will be “Faulty.” There is a hardware problem with the card and it should be replaced. Refer to the <i>Option 11C Compact Planning, Installation and Fault Clearing Guide</i> (NTP553-3121-210).</td></tr> <tr> <td data-bbox="480 1206 795 1230">pass</td><td data-bbox="802 1206 1192 1230">the card can be reenabled.</td></tr> <tr> <td data-bbox="480 1239 795 1378">pass on a card that was already in a “Faulty” state</td><td data-bbox="802 1239 1192 1378">the card is put in “OutOfService” state.</td></tr> </table>	IF diagnostics	THEN	fail	the card status will be “Faulty.” There is a hardware problem with the card and it should be replaced. Refer to the <i>Option 11C Compact Planning, Installation and Fault Clearing Guide</i> (NTP553-3121-210).	pass	the card can be reenabled.	pass on a card that was already in a “Faulty” state	the card is put in “OutOfService” state.
IF diagnostics	THEN								
fail	the card status will be “Faulty.” There is a hardware problem with the card and it should be replaced. Refer to the <i>Option 11C Compact Planning, Installation and Fault Clearing Guide</i> (NTP553-3121-210).								
pass	the card can be reenabled.								
pass on a card that was already in a “Faulty” state	the card is put in “OutOfService” state.								

Section C **DSP Port Status**

In this section

<u>Overview</u>	<u>27-30</u>
<u>The DSP Port Status screen</u>	<u>27-31</u>
<u>Detailed view of the DSP Port Status screen</u>	<u>27-38</u>
<u>Single mode and range mode</u>	<u>27-39</u>
<u>Disabling/enabling DSP ports in single mode</u>	<u>27-40</u>
<u>Disabling/enabling DSP ports in range mode</u>	<u>27-42</u>

Overview

Introduction

The DSP Port Status screen allows you to view the operational status of the DSP ports in the system and enable or disable individual ports when necessary.

Definition: DSP

A DSP is a Digital Signal Processor which is located on a voice processor card. Each DSP supports two physical port locations. The configured port (voice) is referred to as a DSP port or just as a port.

When to use this feature

You would use this feature to

- check the status of DSP ports (are any ports Faulty or OutOfService?)
- disable a port prior to modifying information relating to the port on the Channel Allocation Table

If you are dedicating a port, or assigning a specific out-bound service to a port, you must show this on the Channel Allocation Table. A port must be disabled before any information relating to it can be modified on the Channel Allocation Table.

- reenable a port that was taken out of service

The DSP Port Status screen

Introduction

This section describes the DSP Port Status screen.

The DSP Port Status screen that you access from the System Status and Maintenance menu provides the following functions:

- Enable Port (see pages [27-40](#) to [27-42](#))
- Disable Port (see pages [27-40](#) to [27-42](#))
- Change to Range Mode/Change to Single Mode ([see “Single mode and range mode” on page 27-39](#))

How to reach the screen—two ways

There are two ways to reach two different versions of the System Status screen.

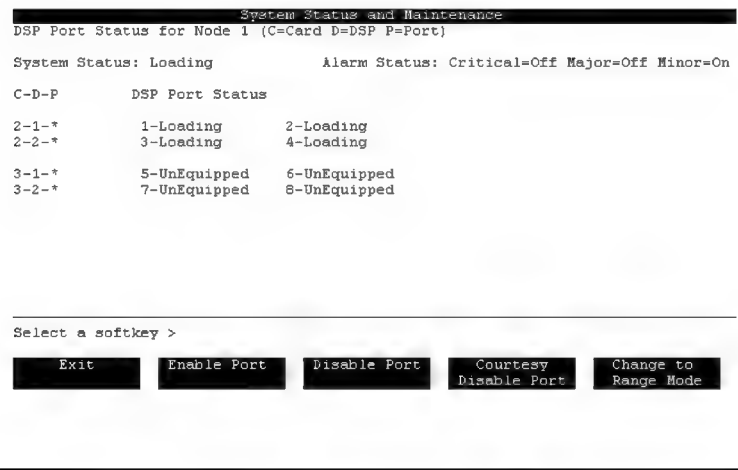
From the Main Menu

To reach the DSP Port Status screen from the Main Menu, follow these steps.

Starting Point: The Main Menu

Step Action

- 1
- Select System Status and Maintenance.
Result: The System Status and Maintenance menu is displayed.
- 2
- Select DSP Port Status.
The DSP Port Status screen is displayed.



From the Logon screen

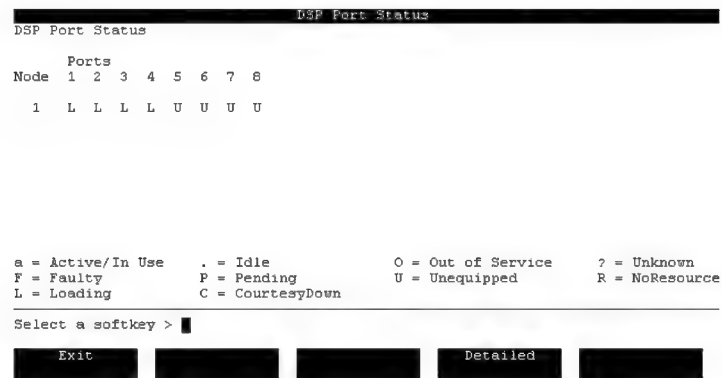
To reach an abbreviated version of the DSP Port Status Screen from the Logon screen, follow these steps.

Starting Point: The Logon/Status screen

Step Action

1 Press the [DSP Port Status] softkey.

Result: The DSP Port Status screen is displayed.



Note: You will not be able to access the maintenance softkeys from this version of the menu.

See Also

For a description of the Detailed view of this screen, [see "Detailed view of the DSP Port Status screen" on page 27-38.](#)

Field descriptions

The following fields appear on the DSP Port Status screen.

System Status

Description	This field displays the current system status.
Possible status types	There are four possible status types. InService This indicates the system is running. CourtesyPending This indicates that the system is in the process of shutting down. CourtesyDown This indicates that the system has shut down and is no longer operational or accepting calls. Loading This indicates the system is loading software during bootup.

Alarm Status

Description	This indicates the state of each of the types of alarms described below.
Alarm types	There are three possible alarm types. Critical These alarms indicate a service-affecting problem that requires immediate attention. Major These alarms indicate a service-threatening problem that may be allowed to persist for up to 24 hours. If not attended to, the alarm could become critical. Minor These alarms indicate a problem that has no impact on the system or users. For more details, see Chapter 28, "SEERs and Alarms".

Alarm states	Each alarm type can be in one of the following states. Off This state indicates that there are no new alarms. This does not necessarily mean that there are no error conditions. On This status indicates that one or more alarm situations were detected. Unk This indicates that the status is unknown.
--------------	--

C-D-P (location)

Description	This is the physical location of each DSP port on the node (card number–DSP–port).
-------------	--

DSP Port Status

Description	This is the current state of each DSP port. The status can be one of the following.
-------------	---

DSP states	Active This status indicates that the DSP port is operational and in use. Idle This status indicates that the DSP port is operational but not currently in use. Faulty This status indicates that the system has detected an error in the DSP port. UnEquipped This status indicates that the DSP port is not defined in the hardware database. For more information about modifying the hardware database, refer to <i>System Administration Tools</i> (NTP 555-7001-305). POutService This status indicates that the DSP port is in the process of shutting down. If [Courtesy Disable Port] was used, the DSP port is still active while in this state. Once the active call is disconnected, the port status will be OutOfService. OutOfService This status indicates that the DSP port is no longer operational as a result of a courtesy disable or forced disable. NoResources This status indicates a transition state that occurs during the initial stages of software loading (after a request to enable a port). When software begins to load, the port is initially in this state, followed by Loading and then Idle, once the software has finished loading.
------------	--

DSP states
(continued)

Loading This status indicates that the DSP port is currently starting up after a request to enable and that the necessary software is loading.

CtsyDown This status indicates that the DSP port is down as a result of a Courtesy Down System.

PCtsyDown This status indicates that the DSP port is in the process of shutting down as a result of a Courtesy Down System, pending the disconnection of any active calls. The DSP port is still active while in this state. Once the active call is disconnected, the port status will be CtsyDown.

Single mode and range mode

Description

Single mode allows you to enable, disable, or courtesy disable individual DSP ports one at a time.

Range mode allows you to enable, disable, or courtesy disable a contiguous range of DSP ports at once. For example, it will work if you need to disable ports 3 to 7, but not if you need to disable ports 1, 3, and 7.

Disabling/enabling DSP ports in single mode

Introduction This section describes how to disable ports in single mode (one port at a time).

Note: If a port is faulty and you attempt to disable it, the screen message will be the same as if you are disabling an idle port. However, the port will not be disabled. A faulty port cannot be disabled or enabled.

The courtesy disable method waits until the call is disconnected before disabling the port. This prevents users from being disconnected suddenly from Meridian Mail Compact Option.

Procedure	Starting Point: The System Status and Maintenance menu
	Step Action
1	Select DSP Port Status.
	Result: The DSP Port Status screen is displayed.
2	Select Courtesy Disable Ports.
	Result: You are prompted for the number of the first DSP port in the range you want to courtesy disable.
3	Enter the DSP port number followed by <Return>.
	Result: The system may take some time to disable the port. In the case of a courtesy disable, the system waits until the active call has been disconnected.
	The system displays a message informing you that the port is being disabled. The message "WORKING..." may also be displayed.
	While the port is being disabled, its status will change to POutService and then to OutOfService.
4	Perform any required maintenance activities.

Step Action

- 5 Press [Enable Port].
Result: You are prompted for the number of a DSP port.
 - 6 Enter the DSP port number followed by <Return>.
Result: The system may take some time to enable the port. The system displays a message informing you that the port is being enabled. The message "WORKING..." may also be displayed.
While the port is being enabled, its status will change to "Loading" and then to "Idle."
 - 7 Press [Exit] to return to the System Status and Maintenance menu.
-

Disabling/enabling DSP ports in range mode

Introduction

Range mode allows you to disable or enable a contiguous range of DSP ports at once. This saves time over disabling or enabling ports one at a time.

Note: If a port is faulty and you attempt to disable it, the screen message will be the same as if you are disabling an idle port. However, the port will not be disabled. A faulty port cannot be disabled or enabled.

The courtesy disable method waits until the call is disconnected before disabling the port. This prevents users from being disconnected suddenly from Meridian Mail Compact Option.

Procedure

Starting Point: The System Status and Maintenance menu

Step Action

- 1 Select DSP Port Status.
Result: The DSP Port Status screen is displayed.
- 2 Press [Change to Range Mode].
Result: The softkey now shows [Change to Single Mode].
- 3 Press Courtesy Disable Port.
Result: You are prompted for the number of the first DSP port in the range you want to courtesy disable.
- 4 Enter the number of the first DSP port in the range followed by <Return>.
Result: You are prompted for the number of the last DSP port in the range.

Step Action

- 5 Enter the number of the last DSP port in the range followed by <Return>.
Result: The system will begin to disable the DSP ports. This may take some time. If you are courtesy disabling the ports, the system will wait for each port to become idle before it disables them.

While the ports are being disabled, their status will change to "POutService" and then to "OutOfService." The message "WORKING..." may also be displayed at this time.

After the disabling is completed, the system displays a message indicating the number of ports that were successfully disabled, and the number of ports that could not be disabled.
 - 6 Perform any required maintenance activities.
 - 7 Press [Enable Port].
Result: You are prompted for the number of the first DSP port in the range of ports you wish to enable.
 - 8 Enter the number of the first DSP port followed by <Return>.
Result: You are prompted for the number of the last DSP port in the range.
 - 9 Enter the number of the last DSP port followed by <Return>.
Result: The system may take some time enabling the ports. The system displays a message to inform you that the DSP ports are being enabled. While the ports are being enabled, their status will change to "Loading" and then to "Idle."

After the enabling is completed, the system displays a message indicating the number of ports that were successfully enabled, and the number of ports that could not be enabled.
 - 10 Press [Exit] to return to the System Status and Maintenance menu.
-

Section D **Channel Allocation Table**

In this section

<u>Overview</u>	<u>27-46</u>
<u>The Channel Allocation Table</u>	<u>27-47</u>
<u>Should you dedicate ports?</u>	<u>27-53</u>
<u>Modifying the Channel Allocation Table</u>	<u>27-55</u>

Overview

Introduction

The Channel Allocation Table (CAT) allows you to

- view how channels are currently allocated across different queues and services
- see what the distribution of port types is (the number of full-voice ports and basic-voice ports)
- move agents from one queue to another as part of the procedure to dedicate a port

When to use this feature?

Normally you will not have to configure this table. When the Meridian Mail Compact Option software is installed, the installation technician configures the switch to match the Channel Allocation Table.

This is also true when you perform a channel expansion (to add new agents). You generally do not have to modify the CAT because it is updated with the information that was provided during the expansion.

However, when you move agents from one queue to another (in order to dedicate them to a particular service), you will have to modify the CAT to show that the agent is now associated with a different queue and that the agent is dedicated to a particular service.

When to dedicate ports

Dedicating ports to a particular service reduces the overall efficiency of your port usage, so you should consider whether it is necessary to dedicate ports.

For more information about port types and dedicating ports, [see the section "Planning your configuration" on page 2215.](#)

The Channel Allocation Table

Introduction

The Channel Allocation Table (CAT) determines how agents on the switch are associated with DSP ports on Meridian Mail Compact Option.

Agents are identified by a terminal number (TN), and ACD directory number (DN), and a single call non-ringing (SCN) DN. Each DSP port must be associated with an existing ACD agent in the Meridian Mail Compact Option PBX database. This is to handle the queuing of calls coming into Meridian Mail Compact Option.

ATTENTION

The Channel Allocation Table (CAT) should only be configured by those who know how to program the switch.

When to use

When you move agents from one queue to another (in order to dedicate them to a particular service), you will have to modify the CAT to indicate the ACD DN with which the agent is now associated as well as the service to which it is dedicated.

For a complete explanation of how to dedicate ports, and how to decide if you need to dedicate ports, [see the section "Planning your configuration" on page 22-15.](#)

How to reach the screen

Starting Point: The Main Menu

Step Action

- 1

Select System Status and Maintenance.
Result: The System Status and Maintenance menu is displayed.
- 2

Select Channel Allocation Table.
Result: The Channel Allocation Table is displayed.

The CAT screen

The Channel Allocation Table also lists the maximum number of voice ports and how the different port types are currently allocated. The Choice of Services list at the top of the screen lists all the services that can be dedicated to a port. To hide this list, press the [Hide Choice of Services] softkey.

System Status and Maintenance

Channel Allocation Table (C=Card D=DSP P=Port)

Choice of Services:

All Services

AS

Announcement Service

EM

Express Messaging

Enterprise Networking

MS

Voice Menu Service

PM

Prompt Maintenance

Remote Activation

TS

Thru-Dial Service

VM

Voice Messaging

Voice Softkey

it; MaxVoice MinMulti; MaxFull;

3 8 0 8

-----Allocated-----

M/F: 0 V/F: 4 V/B: 0

C-D-P

TN

ACD DN

SCN

Type

Capability

Outbound

2-1-1

10-00

7000

7800

Voice

Full Basic

ALL

2-1-2

10-08

7000

7801

Voice

Full Basic

ALL

2-2-1

10-01

7000

7802

Voice

Full Basic

ALL

2-2-2

10-09

7000

7803

Voice

Full Basic

ALL

act a softkey >

Save

Cancel

Hide Choice of Services

Field descriptions

The following items appear on the Channel Allocation Table screen.

Choice of Services

Description	This is a list of voice services and their associated acronyms.
-------------	---

Service restrictions	The following services are available only if voice menus are installed: • AS (Announcement Service) • PM (Prompt Maintenance) • RA (Remote Activation) • TS (Thru-Dial Service) • MS (Voice Menu Service)
Limit	
Description	This is the number of physical port locations on the system from which voice ports are derived.
MaxVoice	
Description	This is the maximum number of voice ports allowed on the system according to your system's keycode.
MinMulti	
Description	Not used.
MaxFull	
Description	This is the maximum number of full service ports allowed on the system according to your system's keycode.
Allocated	
Description	This field shows how the ports are currently allocated.
Allocations	• V/F The number of full service voice ports on the system. • V/B The number of basic service voice ports on the system.

C-D-P

Description	This is the physical location of the DSP port in the Meridian Mail Compact Option system.
Numbering scheme	This number represents the card–DSP–port number. This is a read-only field. The number to the left of the C–D–P field counts the ports and corresponds to the port numbers shown in the DSP Port Status screen.

TN

Description	This is the terminal number or routing address. This is a read-only field specifying the physical location of the corresponding agent in the switch. The elements in the address represent the network card slot and unit (port) on the switch.
-------------	---

ACD DN

Description	This is the primary DN. This is the directory number assigned to the ACD agent queue that contains this port. Note: Before changing the Primary DN, the DSP port must be disabled (use the DSP Port Status screen). If the port is not disabled, this is a read-only field.
Multiple queues	Not used

SCN

Description This is the Single Call Non-ringing DN. This DN corresponds to the secondary DN of the agent that corresponds to this port. This DN is the Key 1 Single Call Non-ringing DN (SCN-DN) assigned to the corresponding agent (not the agent ID associated with Key 0 on the agent set).

Note: Before changing the SCN DN, the DSP port must be disabled (use the DSP Port Status screen). If the port is not disabled, this is a read-only field.

Considerations This DN is taken from Overlay 11 on the Meridian Mail Compact Option PBX. If the DN is not the same as the SCN DN taken from Overlay 11 on the Meridian Mail Compact Option PBX, then features that require Meridian Mail Compact Option to generate a call (such as Call Sender and Thru-Dial) will not function.

For more information about this DN, refer to *Option 11C Compact Planning, Installation and Fault Clearing Guide* (NTP 553-3121-210).

Do not change the SCN DNs. They have been configured by Meridian Mail Compact Option technicians. Changing them could create a conflict.

Type

Description This field shows “Voice”.

Values **Voice** This indicates a port that can provide voice services (such as Voice menus, Announcements, and so on).

Capability

Description	This field indicates the range of services supported on this port. There are two ranges for Meridian Mail Compact Option: "Full" and "Basic".
-------------	---

Outbound

Description	When Meridian Mail Compact Option makes an outbound call, it checks this column to see what ports can be used. "ALL" indicates the port can be used for any outbound service (the port is shared for outbound calls).
-------------	---

If you are dedicating the port to a particular service (outbound or inbound service), enter the service acronym in this column. This will prevent Meridian Mail Compact Option from using that port for another outbound service.

Example	If you enter "OC" in this column for a particular port, the only outbound calls that can be made through this port are OC (RN/DNU) calls. At the same time, OC can use only this port to make outbound calls.
---------	---

Note: You must disable the DSP port (see the DSP Port Status screen) before changing the service associated with it.

Defaults	The default is "ALL," which indicates a shared DSP port.
----------	--

Should you dedicate ports?

Introduction

When you dedicate a port to a particular service that port cannot be used for any other service, including voice messaging (call answering, logging in to Meridian Mail Compact Option). That port is reserved for the service that you have assigned to it.

When ports are shared, they can be used for any service, including voice messaging.

Sharing ports is the most efficient

Sharing your ports usually produces the most efficient system. When a port is dedicated, you can have a situation where callers are unable to log in to Meridian Mail Compact Option because all shared ports are busy, while the dedicated port remains unused because it is reserved for the particular service assigned to it.

Ports are dedicated for incoming calls through the use of ACD queues and the VSDN table.

Ports are dedicated for outgoing calls through the “Outbound” column on the CAT table. Ports that are assigned to different queues can be shared for outgoing calls (for example, Enterprise Networking).

See also

For a complete explanation of dedicated ports, [see the section "Planning your configuration" on page 22-15.](#)

When would you dedicate a port to a particular service

If you need to ensure that you always have a certain number of ports free for a particular service (for example, an important voice menu or announcement), then you may decide you need to dedicate ports to that service.

Dedicating ports for basic- and full-voice services

If you have a mixture of port types (basic service and full service voice ports), then you need to set up a separate ACD queue for each port type. In effect, the ports become dedicated to a specific level of service, for incoming calls. The separate queues ensure that a call made to Meridian Mail Compact Option is connected to a port that is capable of providing the service requested.

For outgoing calls made by Meridian Mail Compact Option (for example, Enterprise Networking), the ports can be shared.

How outbound calls are processed

These are calls made by Meridian Mail Compact Option (for example, announcement service). When Meridian Mail Compact Option makes an outbound call, it seeks a port that has the service capability to make the call. For Meridian Mail Compact Option, this is a basic- or full-voice port.

When ports are dedicated for outbound calls

When you assign a specific outbound service to a port (for example, AS), then no other outbound service can use that port. The port can still be used for any inbound service (incoming calls), unless you have also set up a separate queue for that port.

If you want the port to be completely reserved for a particular service, make it fully dedicated by setting up a separate queue as well as assigning the particular service to the port in the “Outbound” column in the CAT table.

For more information, [see “Fully dedicating ports – blocking inbound and outbound calls” on page 22-46.](#)

Modifying the Channel Allocation Table

Channel allocation and dedication

Consider whether or not it is beneficial or necessary to dedicate ports (channels). [See “Should you dedicate ports?” on page 27-53.](#)

ATTENTION

- Update the Channel Allocation Table only when the system is idle or during low traffic periods.
- The Channel Allocation Table should only be configured by those who are knowledgeable about programming the switch.

Procedure

Starting Point: The System Status and Maintenance menu

Step Action

- 1 Disable the DSP port(s) you wish to reconfigure.
 - To disable a single port [see “Disabling/enabling DSP ports in single mode” on page 27-40.](#)
 - To disable a range of ports [see “Disabling/enabling DSP ports in range mode” on page 27-42.](#)
- 2 Select Channel Allocation Table from the System Status and Maintenance menu.

Result: The Channel Allocation Table is displayed.
- 3 Modify the ports.

For each disabled port, you can change the values in the following fields:

 - ACD DN
 - SCN DN
 - Capability (for voice ports)
 - Outbound (Service)

Step Action

Note: Ports that are not disabled can only be viewed. For the ports that are disabled, the port capability (Full or basic) is highlighted and the ACD DN, SCN, and Outbound fields are underlined.

System Status and Maintenance									
Channel Allocation Table (C=Card D=DSP P=Port)									
Choice of Services:									
ALL	All Services	AS	Announcement Service	EH	Express Messaging				
EN	Enterprise Networking	MS	Voice Menu Service	PM	Prompt Maintenance				
RA	Remote Activation	TS	Thru-Dial Service	VM	Voice Messaging				
VS	Voice Softkey								
Limit: MaxVoice MinMulti: MaxFull; -----Allocated-----									
8 8 0 8 M/F: 0 V/F: 4 V/B: 0									
#	C-D-P	TN	ACD DN	SCN	Type	Capability	Outbound		
1	2-1-1	10-00	7000	7800	Voice	Full Basic	ALL		
2	2-1-2	10-08	7000	7801	Voice	Full Basic	ALL		
3	2-2-1	10-01	7000	7802	Voice	Full Basic	ALL		
4	2-2-2	10-09	7000	7803	Voice	Full Basic	ALL		
Select a softkey >									
Save		Cancel						Hide Choice of Services	

4 Are you satisfied with the changes?

- If yes, press [Save].
- If no, press [Cancel].

Result: You are returned to the System Status and Maintenance menu.

5 Reenable any DSP ports you have put out of service.

- To enable a single port [see "Disabling/enabling DSP ports in single mode" on page 27-40.](#)
- To enable a range of ports [see "Disabling/enabling DSP ports in range mode" on page 27-42.](#)

Section E **Disk Maintenance**

In this section

<u>Overview</u>	<u>27-58</u>
<u>Checking disk status</u>	<u>27-59</u>
<u>Replacing a failed disk</u>	<u>27-63</u>
<u>Running diagnostics on a disk</u>	<u>27-64</u>

Overview

Introduction

The Disk Maintenance screen allows you to view the operational state of the disk on your system.

When to use this feature

If you suspect the hard disk on your system is not functioning properly, you can run a diagnostic check using the [Diagnostics] softkey on the Disk Maintenance screen. [See “Running diagnostics on a disk” on page 27-64.](#)

Checking disk status

Introduction

The Disk Maintenance screen lists the disks on your system and displays their current states.

Disk status

A disk can be in one of the following states:

- **ReadWrite** The disk is in service (functioning properly according to Meridian Mail Compact Option).
- **NoAccess** The disk is disabled. Check your SEERs for more information.
- **Faulty** The disk has failed a diagnostics check that was performed using the [Diagnostics] softkey from the Disk Maintenance screen.

Procedure

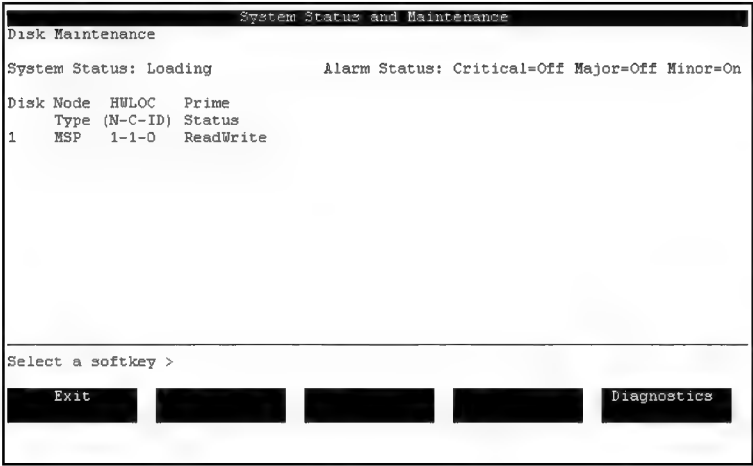
Starting Point: The Main Menu

Step	Action
------	--------

- | | |
|---|--|
| 1 | Select System Status and Maintenance.
Result: The System Status and Maintenance menu is displayed. |
| 2 | Select Disk Maintenance.
Result: The Disk Maintenance screen is displayed. |

Disk Maintenance screen

The following is an example of the Disk Maintenance screen.



Field descriptions The following fields appear on the Disk Maintenance screen.

System Status

Description	This field displays the current system status.
Possible status types	The possible status types are as follows. InService This indicates the system is running. CourtesyPending This indicates that the system is in the process of shutting down. CourtesyDown This indicates that the system has shut down and is no longer operational or accepting calls. Loading This indicates the system is loading software during bootup.

Alarm Status

Description	This indicates the state of each of the types of alarms described below.
-------------	--

Alarm types	There are three possible alarm types. Critical These alarms indicate a service-affecting problem that requires immediate attention. Major These alarms indicate a service-threatening problem that may be allowed to persist for up to 24 hours. If not attended to, the alarm could become critical. Minor These alarms indicate a problem that has no impact on the system or users. For more details, see Chapter 28, "SEERs and Alarms".
Alarm states	Each alarm type can be in one of the following states. Off This state indicates that there are no new alarms. This does not necessary mean that there are no error conditions. On This status indicates that one or more alarm situations were detected. Unk This indicates that the status is unknown.
Disk	
Description	This is the number assigned to the disk.
Node Type	
Description	This is the type of node (MSP node).
HWLOC	
Description	The hardware location of the disk (node number–card number–disk ID).
Example	The numbers 1–1–0 refer to: Node number (1) Card number (1) Disk id (0)

Prime Status

Description	This is the status of the disk on the node.
Possible states	A disk can be in one of the following states: ReadWrite The disk is operating properly. NoAccess The disk is disabled. Write The disk is being written to (during a disk synchronization in a shadowed system). Faulty The disk failed a diagnostic check that was performed using the [Diagnostics] softkey on the Disk Maintenance screen.

Replacing a failed disk

Where to find information

The procedures for replacing a failed disk are provided in the *Option 11C Compact Planning, Installation and Fault Clearing Guide* (NTP 553-3121-210).

Running diagnostics on a disk

Introduction If you suspect a problem with a disk, run the diagnostic function on the disk. The system responds with a message indicating if the disk is ok (passed) or faulty (failed).

Procedure **Starting Point:** The Main Menu

Step	Action
1	Select System Status and Maintenance. Result: The System Status and Maintenance menu is displayed.
2	Select Disk Maintenance. Result: The Disk Maintenance screen is displayed.
3	Press the [Diagnostics] softkey. Result: You are prompted to enter a disk number.
4	Enter the number of the disk you want to check. Result : After a few moments, the system responds with the results of the diagnostic check.

Possible results The system will respond with one of the following messages:

Message	Meaning
Disk diagnostics passed.	The disk is functioning normally.
Disk diagnostics failed. xxxx (where “xxxx” is the error code)	The disk is not functioning properly. A SEER is generated which will provide more details on what the problem is and what action you should take.

Message	Meaning
Invalid component state to do disk diagnostics.	If the disk is not in a valid state (InService, OutOfService, Faulty, or Unconfigured), then the diagnostics routine will not run. Contact your regional support centre.
Invalid node state to run diagnostics on this disk.	The node must be InService, OutOfService state for the diagnostics routine to run.

Section F **Diagnostic Schedules**

In this section

<u>Overview</u>	<u>27-68</u>
<u>What are Voice Path Diagnostics?</u>	<u>27-69</u>
<u>Changing the parameters and schedule for diagnostics</u>	<u>27-70</u>
<u>Analyzing the results of the diagnostics</u>	<u>27-75</u>

Overview

Introduction

The Diagnostics Schedules screen allows you to schedule a diagnostic check on the voice channels in your system. You can control what time the diagnostics take place (to avoid peak traffic periods), and whether or not a faulty channel is taken offline.

When to use this feature

If you have not enabled voice path diagnostics yet, you would use this feature to

- schedule when you want voice path diagnostics to take place

If the voice path diagnostic tests are causing a traffic problem, you can use this feature to

- change the voice path diagnostics schedule to a less-busy time
- disable voice path diagnostic testing
- change what happens when voice path diagnostics fail (whether channels taken offline or left InService)
- change the duration of the voice path diagnostics
- change the minimum number of channels that must be idle before voice path diagnostics will run

What are Voice Path Diagnostics?

**Definition:
Voice Path
Diagnostics**

Voice Path Diagnostics is a feature that tests the operational state of the voice channels.

How the test is done

The system sets up calls which go from Meridian Mail Compact Option to the switch and back. Two channels are tested at a time (one to make the call to the switch, one to receive the call from the switch). Only InService channels are tested.

The test continues until either

- all InService channels are tested, or
- the maximum duration allowed for the tests runs out

**Definition:
Originator and
Destination**

The Originator is the port used to make the call from Meridian Mail Compact Option to the switch. The Destination is the port used to receive the call back from the switch to Meridian Mail Compact Option.

Possible test results

A channel can pass, fail, or be left untested. For more details, [see “Analyzing the results of the diagnostics” on page 27-75.](#)

Changing the parameters and schedule for diagnostics

Introduction

The parameters and schedule for diagnostics are defined on the Diagnostic Schedules screen.

On this screen you can

- enable or disable diagnostics
- change the time or days that diagnostics are run
- change the maximum duration for voice path diagnostics
- determine if a faulty channel is automatically taken out of service
- determine the minimum number of idle channels that must be present before voice path diagnostics are run

Note: Changes to the schedule or parameters while diagnostics are running will not take effect until the current diagnostics session is completed.

The Diagnostic Schedules screen

The following is an example of the Diagnostic Schedules screen.

System Status and Maintenance	
Diagnostic Schedules	
Start Time (hh:mm):	02:00
Schedule Diagnostics on the Following Days:	
Monday	No Yes
Tuesday	No Yes
Wednesday	No Yes
Thursday	No Yes
Friday	No Yes
Saturday	No Yes
Sunday	No Yes
Bus Controller Diagnostics:	Disabled Enabled
Voice Path Diagnostics:	Disabled Enabled
Mark Channel Faulty if Voice Path Diagnostics Fail:	No Yes
Select a softkey >	
Save	Cancel

All the fields do not fit on the first screen. When you scroll to the next screen, one additional field is displayed: “Minimum Number of Idle Channels for Voice Path Diagnostics.”

Field descriptions

The following fields appear on the Diagnostic Schedules screen.

Start Time (hh:mm)

Description	This is the time that voice path diagnostics begin.
Tip	Set the start time to a low-traffic part of the day.
Default	3:00 am (03:00)

Schedule Diagnostics on the Following Days

Description	For each day listed, select Yes to allow diagnostics to run on that day, or select No to disable diagnostics for that day.
Default	For each day, the default is Yes.

Voice Path Diagnostics

Description	This field determines if voice path diagnostics are enabled or disabled.
Default	Enabled

Mark Channel Faulty if Voice Path Diagnostics Fail

Description	Set this field to Yes if you want a faulty channel to be taken out of service. If you set this field to No, the channel remains InService. In either case, a SEER is issued indicating the channel is faulty.
-------------	---

Considerations	If channels are taken out of service by the diagnostics routine, system performance may be affected as the number of channels InService decreases. Keep in mind that even if faulty channels are left InService, you still need to investigate why the channel is being tagged as faulty by the diagnostics routine.
Default	No

Maximum Duration of Voice Path Diagnostics (hh:mm)

Description	This is the maximum length of time voice path diagnostics are allowed to run during one session.
Considerations	While diagnostics are running, two channels are unavailable for use. This may impact system performance if the diagnostics continue into a high-traffic time period.
Default	2 hours (02:00)

Minimum Number of Idle Channels for Voice Path Diagnostics

Description	This is the number of channels that must be idle in addition to the two channels required for the diagnostic tests. If this field is set to 2, then 4 channels must be idle before voice path diagnostics will begin. After voice path diagnostics finishes testing a pair of channels, it checks again to make sure there are enough idle channels in addition to the two channels required for testing, as specified in this field, before continuing.
Considerations	If the diagnostics are causing a traffic problem, you may wish to increase the number of idle channels that must be present.

Example	If this field is set to 2, then 4 channels must be idle before each diagnostic test. After voice path diagnostics finishes testing a pair of channels, it checks that at least 4 channels are idle before acquiring 2 of those idle channels for the next test. In this manner, voice path diagnostics continues until all channels have been tested, or until the Maximum Duration value is exceeded.
Default	2

Procedure

Starting Point: The Main Menu

Step Action

- 1 Select System Status and Maintenance.
Result: The System Status and Maintenance menu is displayed.
 - 2 Select Diagnostic Schedules.
Result: The Diagnostic Schedules screen is displayed.
 - 3 Fill in the fields as required. [See "Field descriptions" on page 27-71.](#)
 - 4 Are you satisfied with the changes?
 - If yes, press [Save].
Result: The changes are saved and you are returned to the System Status and Maintenance menu.
 - If no, press [Cancel].
Result: The changes are not saved and you are returned to the System Status and Maintenance menu.
-

Analyzing the results of the diagnostics

Introduction The results of the diagnostics are provided through SEERs.

Possible test results The following possible results are presented in the SEERs.

Test result	Originator's state	Destination's state	Meaning/Action taken
Passed	n/a	n/a	Both the originator and destination ports are tagged as passed.
Failed (after testing)	Untested	Passed	The originator port is faulty. A major alarm SEER is generated to inform you of the failure. If the Mark Channel Faulty if Voice Path Diagnostics Fail field on the Diagnostic Schedules screen is set to Yes, the originator port's status is changed to OutOfService.
Failed (after testing)	Passed	Untested	The destination port is faulty. A major alarm SEER is generated to inform you of the failure. If the Mark Channel Faulty if Voice Path Diagnostics Fail field on the Diagnostic Schedules screen is set to Yes, the destination port's status is changed to OutOfService.
Failed (due to inability to test)	Untested	Untested	The status of the ports remain unchanged because the ports were not tested. The maximum duration for diagnostics ran out before these ports were tested.

**Summary SEER
(number 7400)**

When a diagnostics session is completed (all InService channels are tested, or the maximum duration allowed expires), a summary SEER is generated.

The SEER number is 7400, with severity level “Info,” and type “Admin.”

This SEER provides the following information:

- the total number of InService channels found on the system
- the total number of channels tested
- the total number of channels failed
- the total number of channels untested
- a list of failed channels

**Other SEERs
(class 74)**

Scan the SEERs generated during the diagnostic session for class 74 SEERs. Class 74 SEERs include SEERs related to failed or untested channels.

**Impact on Operational
Measurement reports**

On the Services Summary report, the count for the Voice Path Diagnostics service will be greater than or equal to the number of channels tested.

The count for the default voice service (usually Voice Menus) will also show some additional calls in the time period in which voice path diagnostics was running. This is because the default voice service is used to assist in establishing the call loop between Meridian Mail Compact Option and the switch.

Chapter 28

SEERs and Alarms

In this chapter

<u>Overview</u>	<u>28-2</u>
<u>Section A: SEERs and Alarms</u>	<u>28-3</u>
<u>Section B: Customizing SEER processing</u>	<u>28-15</u>
<u>Section C: Notification options for SEERs and alarms</u>	<u>28-29</u>

Overview

Introduction

This chapter describes System Event and Error Reports (SEERs) and alarms in the following sections.

[Section A: SEERs and Alarms](#) provides conceptual information about SEERs and Alarms. Procedures for SEER retrieval and alarm silencing are described in this section.

[Section B: Customizing SEER processing](#) provides information regarding SEER remapping, SEER throttling, and SEER escalation.

[Section C: Notification options for SEERs and alarms](#) describes the SEER and alarm processing path in the Meridian Mail Compact Option system. Also, the procedures for setting up SEERs printing, filtering, and triggering are described.

Section A **SEERs and Alarms**

In this section

<u>What is a SEER?</u>	<u>28-4</u>
<u>Retrieving SEERs</u>	<u>28-6</u>
<u>What is an alarm?</u>	<u>28-9</u>
<u>How to check alarm status</u>	<u>28-10</u>
<u>Silencing an alarm</u>	<u>28-12</u>

What is a SEER?

Concept

System Event and Error Reports (SEERs), which are generated by the Meridian Mail Compact Option system software components, identify every significant system event and error that occurs.

An event is a minor glitch or an announcement of normal system activities (for example, the start of an automatic tape backup). Events documented in a SEER do not usually indicate a problem with the Meridian Mail Compact Option functionality.

An error is a hardware or software fault that may prevent Meridian Mail Compact Option from functioning properly (for example, a hardware component that failed diagnostics, or a failure to find a system file). An error creates one or more SEERs.

You must be able to read, interpret, and assess the severity of events and errors to determine if they are regular system events (such as a system audit) or system errors. An understanding of SEERs is also essential for diagnosing problems. Before asking for help in dealing with a major system problem, the system administrator must be ready to provide a collection of SEER reports from which the Northern Telecom support staff can determine the history of the problem. From these reports, maintenance personnel will be able to diagnose the problem effectively.

SEER components

Each SEER is identified by a number consisting of two parts:

- SEER class, which classifies a particular software component
- SEER number, which identifies a particular report for a class

**SEER components,
cont'd****Example**

SEER 6603 is SEER number 03 from class 66.

Note: Due to ongoing improvements in the software, there may be instances where the information on the SEER itself is different from the information presented in the *Maintenance Messages (SEERs) Reference Manual* (NTP 555-7001-510). Should this occur, the information in the SEER printed out by your system should take precedence.

**How SEERs are
accessed**

SEERs can be displayed on a terminal or printed out on a printer. The reports provide information about the SEER class, SEER number, the severity level of errors, the date and time the SEER was generated, and a description of the event or error that occurred at that time. This information is used primarily by system administrators and maintenance personnel to confirm that a system is running correctly, to isolate a system fault, to diagnose a hardware or software problem, or to solve a problem.

SEERs are printed and stored in the SEER file on the system disk at the time of the error or event. The SEERs stored on disk can be viewed or printed at a later time. The SEER file holds up to 4000 records.

Retrieving SEERs

Introduction

This topic provides information required for retrieving SEERs from the SEER history file that resides on the system disk. SEERs are retrieved by class only.

The SEER Retrieval screen

This is an example of the SEER Retrieval screen.

System Event and Error Reports		
SEER Retrieval		
SEER Class:	<u>11</u>	
Severity Level:	Critical Major Minor <u>!!!</u>	
SEER Type:	Error Admin System <u>!!!</u>	
Report Start (mm/dd/yy hh:mm):	<u>05/31/96 12:00</u>	(or blank for oldest)
Report End (mm/dd/yy hh:mm):	<u>05/31/96 16:00</u>	(or blank for newest)
Select a softkey>		
Exit		View Reports Print Reports

Field descriptions

This table describes the fields in the SEER Retrieval screen.

SEER Class	
Description	The class of SEERs that you want to retrieve. If you leave the field blank, all classes will be retrieved.
Classes	For a list of supported SEERs classes, refer to the <i>Maintenance Messages (SEERs) Reference Manual</i> (NTP 555-7001-510).
Default	The field is blank.
Severity Level	
Description	The severity level of the SEERs class.
Options	Critical, Major, Minor, All
Default	All
SEER Type	
Description	The SEER type required.
Options	Error, Admin, System, All
Default	All
Report Start/End	
Description	This field allows the administrator to specify the start and end date and time for the SEER retrieval. If left blank, the search provides all SEERs meeting the search criteria that are in the history file.
Default	The field is blank.

Procedure

To retrieve SEERs from the history file, follow these steps.

Starting Point: The Main Menu

Step Action

- 1 Select System Status and Maintenance.
Result: The System Status and Maintenance screen is displayed.
- 2 Select System Event and Error Reports from the menu.
Result: The System Event and Error Reports screen is displayed.
- 3 Select SEER Retrieval.
Result: The SEER Retrieval screen is displayed.
- 4 Complete the SEER Class, Severity Level, and SEER Type fields for the SEERs that you want to retrieve.
Note: If the SEER Class field is left blank, all classes of SEERs are retrieved.
- 5 Enter the Report Start and Report End criteria to narrow the search to a specific date and time interval. Otherwise, leave these fields blank.
- 6 Use this table to determine the next step.

IF you want to	THEN press the
view the SEERs retrieved by the search	[View Reports] softkey.
print the SEERs retrieved by the search	[Print Reports] softkey.

Result: For View Reports, the reports are displayed. For Print Reports, press the [Continue Printing] softkey to print the report. Press the [Cancel Printing] softkey to cancel printing and return to the SEER Retrieval screen.

- 7 Press the [Exit] softkey to return to the System Event and Error Reports menu.
-

What is an alarm?

Introduction

An alarm is an audible notification that something is not right with the Meridian Mail Compact Option system. Alarms are sounded if a corresponding severity level SEER is issued to indicate a system problem.

Alarm types

There are three types of alarms: critical, major, and minor.

Critical alarm

These alarms indicate a service-affecting problem that requires immediate attention.

Major alarm

This type of alarm indicates a service-threatening problem that may be allowed to persist (for up to 24 hours). If not attended to, the alarm could become critical.

Minor alarm

This type of alarm indicates a problem that has no impact on the system or users.

How to check alarm status

Introduction This procedure explains how to check for the status of alarms.

Procedure from outside Meridian Mail Compact Option To check which alarms are on (or off) if you are not currently logged in to Meridian Mail Compact Option, follow these steps.

Starting Point: ILogon/Status screen

Step Action

- 1 Press the [System Status] softkey.
Result: The System Status screen is displayed.

System Status											
System Status: Loading			Alarm Status: Critical=Off Major=Off Minor=On								
Last Event: 11-50 VS1 Stale File Version: root=23513 Read Client RT11/16 15:30											
Link Status: 1-1-2: InService											
			DSP Port Status							Storage Used	
Node	Type	Status	Active	Idle	OutSv	Faulty	Pending	Others		Voice	Text
1	MSP	InService	0	0	0	0	0	4		7%	54%

Select a softkey >



- 2 View the Alarm Status field in the upper right-hand corner for the alarms status.

Procedure from within Meridian Mail Compact Option

To check which alarms are on (or off) if you are logged in to Meridian Mail Compact Option, follow these steps.

Starting Point: The Main Menu

Step Action

- 1 Select System Status and Maintenance.

Result: The System Status and Maintenance screen is displayed.

- 2 Select System Status from the menu.

Result: The System Status screen is displayed.

```

System Status
System Status: Loading      Alarm Status: Critical=Off Major=Off Minor=On
Last Event: 11-50 VS1 Stale File Version: root=23513 Read Client RT11/16 15:30
Link Status: 1-1-2: InService

Node Type Status      Active Idle OutSv Faulty Pending Others Storage Used
1 MSP InService      0 0 0 0 0 0 4 7% 54%

```

Select a softkey >

Exit

- 3 View the Alarm Status field in the upper right-hand corner for the alarms status.

Silencing an alarm

Introduction

The Meridian Mail Compact Option system will sound an alarm if the corresponding severity level SEER is issued indicating that a problem exists. Alarms are silenced from the Logon/Status or the System Status and Maintenance screen.

Alarms persist until you silence them. (There is no timeout period after which they are turned off by the system.)

System Status and Maintenance screen

This is an example of the [Silence Alarm] softkey on the System Status and Maintenance screen.

The screenshot shows a terminal window titled "System Status and Maintenance". Inside, there is a numbered list of seven options: 1 System Status, 2 Card Status, 3 DSP Port Status, 4 Channel Allocation Table, 5 Disk Maintenance, 6 Diagnostic Schedules, and 7 System Event and Error Reports. Below the list is a prompt "Select an item > =". At the bottom of the screen is a row of five softkey buttons. The first button is labeled "Exit", and the fourth button is labeled "Silence Alarm". The other three buttons are unlabeled.

When the [Silence Alarm] softkey is pressed, the softkeys change to include [Silence Critical Alarm], [Silence Major Alarm], and [Silence Minor Alarm] as shown below.

System Status and Maintenance			
1	System Status		
2	Card Status		
3	DSP Port Status		
4	Channel Allocation Table		
5	Disk Maintenance		
6	Diagnostic Schedules		
7	System Event and Error Reports		
Select a softkey > _			
	Cancel	Silence Critical Alarm	Silence Major Alarm
			Silence Minor Alarm

Procedure

To silence an alarm when logged in to Meridian Mail Compact Option, follow these steps.

Starting Point: The Main Menu

Step Action

- 1 Select System Status and Maintenance.
Result: The System Status and Maintenance screen is displayed.
 - 2 Press the [Silence Alarms] softkey.
Result: The [Silence Critical], [Silence Major], and [Silence Minor Alarm] softkeys are displayed.
 - 3 Press the appropriate softkey to cancel the type of alarm that is sounding.
Result: The alarm is silenced.
Press [Cancel] to return to the System Status and Maintenance screen.
-

To silence an alarm from the Meridian Mail Compact Option Logon/Status screen, follow these steps.

Starting Point: The Meridian Mail Logon/Status screen

Step Action

- 1 Press the [Silence Alarms] softkey.
Result: The [Silence Critical], [Silence Major], and [Silence Minor Alarm] softkeys are displayed.
 - 2 Press the appropriate softkey to cancel the type of alarm that is sounding.
Result: The alarm is silenced.
Press [Cancel] to return to the Meridian Mail Compact Option Logon/Status screen.
-

Section B **Customizing SEER processing**

In this section

<u>Overview</u>	<u>28-16</u>
<u>Using SEER remapping</u>	<u>28-17</u>
<u>Using SEER throttling</u>	<u>28-21</u>
<u>Using SEER escalation</u>	<u>28-25</u>

Overview

Introduction

This section includes descriptions of three SEERs features: remapping, throttling, and escalation, as well as procedures for setting up these features on the Meridian Mail Compact Option system.

Using SEER remapping

Description

SEERs remapping allows the system administrator to remap or reassign the severity level of up to 60 SEERs to a higher or lower severity level. The remapping can be applied to individual SEERs only, and the revised configuration is stored in the System Profile on disk. This means that the parameters do not have to be reentered after a system reboot.

Note: SEER remapping is not the same as memory remapping. Memory remapping is done using the special utility, SE_UTIL function, with the aid of your distributor. For information on memory remapping, refer to the *Maintenance Messages (SEERs) Reference Manual* (NTP 555-7001-510).

The SEER remapping changes are made using the SEER Remap Table. Changes are effective immediately upon saving the table. No validation is performed on the revised SEERs to determine if the entered SEER actually exists, if the severity level is different from the existing severity level, or if the SEER has already been remapped using memory remapping.

If the altered severity level is no longer required, delete the entry from the SEER Remap Table instead of resetting the severity level back to the original.

The SEER Remap Table

This is an example of the SEER Remap Table.

[illegible]

Field descriptions

The following table describes the fields in the SEER Remap Table.

SEER	
Description	The four- or five-digit number of the SEER to be remapped.
Default	None
Severity	
Description	The new severity for the SEER.
Options	Info, Minor, Major, or Critical (Only the first two letters of the option need to be entered into the field.)
Default	Blank
Message Trigger	
Description	This field is used to set the message trigger on.

Options	Enter Yes to set the message trigger; if you leave the field blank, the message trigger remains off.
Default	Blank

Procedure

To remap SEERs, follow these steps.

Starting Point: The Main Menu

Step	Action
------	--------

- | | |
|---|--|
| 1 | Select System Status and Maintenance.
Result: The System Status and Maintenance menu is displayed. |
| 2 | Select System Event and Error Reports.
Result: The System Event and Error Reports menu is displayed. |
| 3 | Select SEER Remap Table.
Result: The SEER Remap Table is displayed. |
| 4 | Enter the SEER number in the SEER field. |
| 5 | Use the tab key to move the cursor to the Severity field. Enter the new severity. |

Step Action

6 Use the tab key to move the cursor to the Message Trigger field. To set the message trigger, enter Yes in this field.

7 Use this table to determine the next step.

IF**THEN**

you have more SEERs to remap [repeat steps 4 through 6.](#)

you have entered all SEERs in the table that require remapping [go to step 8.](#)

8 Press the [Save] softkey to save the remapping table.

Result: The table is saved and the SEERs are remapped.

Press the [Cancel] softkey to cancel changes to the remap table.

Result: The changes are cancelled and you are returned to the System Event and Error Reports menu.

Using SEER throttling

Introduction

To reduce SEER proliferation, the customer administrator can control the flow of duplicate messages for a specified period of time. SEER throttling monitors SEERs and stops printing a specific SEER type if too many of that type are generated within a given interval.

If the parameters for throttling are exceeded, the throttled SEER will not be sent to the Message Trigger Mailbox or the SEER printer. The configuration for SEER throttling is stored in the System Profile; therefore, the throttling data does not have to be reentered after a system reboot.

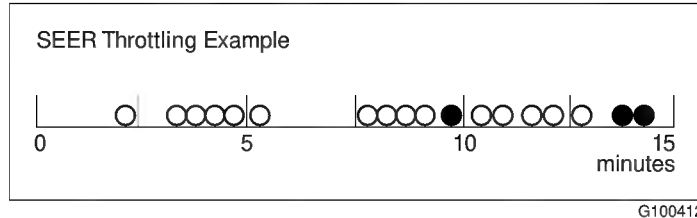
When SEER throttling is invoked, a SEER is generated to alert users. SEER throttling will “timeout” after an interval and allow the system to continue to print the prohibited SEER type. If the original error condition still exists, another spurt of SEERs will be displayed until SEER throttling is triggered again. This provides you with ongoing monitoring of the error situation.

Example

In this example, the throttling threshold count is set to 5, and the throttling threshold interval is set to 5 minutes. The circles in the following diagram represent occurrences of the same SEER. Note that the sixth occurrence of the SEER is not throttled, even though it occurs within five minutes of the first occurrence of the SEER, because throttling of an individual

Example, cont'd

SEER is reset at the end of the throttling threshold period (for example, 5 minutes, 10 minutes, and so on).



The black circles indicate instances when the SEER has been throttled. The throttled SEER will not be sent either to the Message Trigger Mailbox or the SEER printer (if filtered printing was chosen).

SEER Configuration screen

This is an example of the SEER Configuration screen.

```

System Event and Error Reports

SEER Configuration

Message Trigger Mailboxes:
  Mailbox: 7555
  Mailbox: 7556

SEER Printer Output:           None Filtered Unfiltered

SEER Throttle Threshold Count: 5      Throttle Interval (hh:mm): 00:05
SEER Escalation Threshold Count: 0    Escalation Interval (hh:mm): 00:05

SEER Filters:
  SEER Severity Threshold:  None Critical Major Minor
  SEER Type Threshold:      Error Admin

```

Field descriptions

The following table describes the fields used for SEER throttling in the SEER Configuration screen.

SEER Throttle Threshold Count

Description	This field is used to indicate the number of duplicate SEERs that must occur within the SEER Throttle Threshold Interval at which time the duplicate SEER will be throttled for the remainder of the SEER throttle threshold interval.
Range	0 to 100. The 0 indicates that SEER Throttling is not activated.
Default	5

SEER Throttle Interval

Description	This field is used to specify the time period in hours and minutes (hh:mm) where the number of duplicate SEERs must exceed the SEER Throttle Threshold Count value at which time the SEER Throttling is to occur.
Range	00:01 to 24:00 (1 minute to 24 hours)
Default	00:05

**Setting SEER
throttling**

To set throttling for SEERs, follow these steps.

Starting Point: The Main Menu

Step Action

- 1 Select System Status and Maintenance.
Result: The System Status and Maintenance screen is displayed.
 - 2 Select System Event and Error Reports from the menu.
Result: The System Event and Error Reports screen is displayed.
 - 3 Select SEER Configuration.
Result: The SEER Configuration screen is displayed.
 - 4 In the SEER Throttle Threshold Count field, enter the threshold count.
 - 5 In the SEER Throttle Interval field, enter the interval that you want to use for throttling the SEERs.
 - 6 Press the [Save] softkey to save your choices.
Result: The changes are saved and you are returned to the System Event and Error Reports menu.
Press the [Cancel] softkey to cancel changes to the SEER configuration.
Result: The changes are cancelled and you are returned to the System Event and Error Reports menu.
-

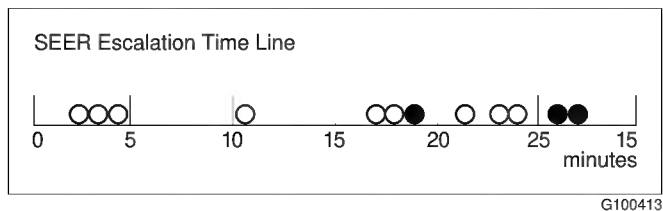
Using SEER escalation

Introduction

The administrator can escalate the severity level of frequently issued minor and major SEERs to the next level. If the same SEER is issued a specified number of times during a specified period of time, the severity level of the SEER is escalated to the next highest severity level. This applies to Minor and Major SEERs only. Info SEERs cannot be escalated.

Example

The escalation threshold count is set to 4, and the escalation threshold interval is set to 10 minutes for this example. The occurrence of a Major SEER is represented by a circle.



The black circles indicate occurrences of the major SEER that will be escalated to a critical severity level. The occurrence of the SEER at 11 minutes will not be escalated because the fourth occurrence of the SEER is outside the 10-minute interval; however, in the 10 to 20 minute range four SEERs occur, causing the fourth SEER to be escalated to the critical severity level.

SEER Configuration screen

This is an example of the SEER configuration screen.

System Event and Error Reports

SEER Configuration

Message Trigger Mailboxes:

Mailbox: 7555

Mailbox: 7556

SEER Printer Output:

None

Filtered

Unfiltered

SEER Throttle Threshold Count: 5

Throttle Interval (hh:mm): 00:05

SEER Escalation Threshold Count: 0

Escalation Interval (hh:mm): 00:05

SEER Filters:

SEER Severity Threshold:

None

Critical

Major

Minor

SEER Type Threshold:

Error

Admin

Select a softkey>

Save

Cancel

Field descriptions

The following table describes the fields used for SEER escalation in the SEER Configuration screen.

SEER Escalation Threshold Count	
Description	This field is used to indicate the number of duplicate SEERs that must occur within the SEER Escalation Threshold Interval before the SEER severity is raised to the next highest level.
Range	0 to 100. The 0 indicates that SEER Escalation is not activated.
Default	0
SEER Escalation Interval	
Description	This field is used to specify the time period in hours and minutes (hh:mm) where the number of duplicate SEERs must exceed the SEER Escalation Threshold Count value before the SEER severity is raised to the next highest level.
Range	00:01 to 24:00 (1 minute to 24 hours)

Default	00:05
---------	-------

Setting SEER escalation

To set SEERs escalation, follow these steps.

Starting Point: The Main Menu

Step Action

- 1 Select System Status and Maintenance.
Result: The System Status and Maintenance screen is displayed.
 - 2 Select System Event and Error Reports from the menu.
Result: The System Event and Error Reports screen is displayed.
 - 3 Select SEER Configuration.
Result: The SEER Configuration screen is displayed.
 - 4 In the SEER Escalation Threshold Count field, enter the threshold count.
 - 5 In the Escalation Interval field, enter the interval that you want to use for SEERs escalation.
 - 6 Press the [Save] softkey to save your choices.
Result: The changes are saved and you are returned to the System Event and Error Reports Menu.
Press the [Cancel] softkey to cancel changes to the SEER configuration.
Result: The changes are cancelled and you are returned to the System Event and Error Reports menu.
-

Section C **Notification options for SEERs and alarms**

In this section

<u>Overview</u>	<u>28-30</u>
<u>Notification options for SEERs and alarms</u>	<u>28-31</u>
<u>Using SEER filtering</u>	<u>28-33</u>
<u>Using SEER triggering</u>	<u>28-37</u>
<u>SEERs printing</u>	<u>28-40</u>
<u>Setting the SEER printer port name</u>	<u>28-42</u>

Overview

Introduction

This section describes

- the route that a SEER takes after it is issued by the Meridian Mail Compact Option system
- using the SEER filtering and triggering features
- setting up printing for SEERs

Notification options for SEERs and alarms

Introduction

This section describes the route that a SEER follows after it has been issued by the Meridian Mail Compact Option system.

How the Meridian Mail Compact Option system processes a SEER

The following provides an overview of how the Meridian Mail Compact Option system processes a SEER.

1. The SEER is issued by the Meridian Mail Compact Option system. An audible alarm sounds if the severity level is critical, major, or minor and the alarm feature has been wired on your system.
2. The system scans the memory remap table for the SEER that has been issued. If the SEER matches an entry in the memory remap table, the SEER's severity and type is changed to that of the table entry.
3. If the SEER does not match an entry in the memory remap table, the system scans the SEER remap table. If the SEER matches an entry in the SEER remap table, the SEER's severity is changed to that of the table entry.
4. Next, the remapped SEER severity is escalated if the escalation thresholds are exceeded. The SEER is sent to the SEER history file.

5. The next step in the SEER path is determined by the following.

IF the SEER configuration is set to	THEN
Unfiltered	printer filtering and throttling is applied to the SEER and the output is sent to the printer. The processing ends.
Message Trigger is set to YES in the Remap Table	SEER filtering is bypassed and the SEER is sent to the Message Trigger mailbox after passing through SEER throttling. The processing continues with step 6 .
Filtered and Message Trigger is not set to Yes	SEER filtering is applied to the SEER. If the SEER passes through the filter, processing continues with step 6 .

6. SEER throttling checks the SEER to see if it is a duplicate that exceeds the throttling threshold.
7. If the SEER passes SEER Throttling and the Message Trigger is set to Yes, a trigger message is composed and deposited in the Message Trigger mailbox. Also, the SEER is printed on the console printer.

Using SEER filtering

Introduction

SEER filtering parameters allow the administrator to limit the number of SEERs sent to the Message Trigger Mailbox. Only the SEERs required for proper system operation, maintenance, or hacker tracking activity should be sent to the Message Trigger Mailbox.

The administrator may choose to filter the SEERs based on the severity or type of SEER, or both. The filtering parameters can also be used to limit the SEERs that are sent to the SEER printer if the appropriate SEER Printer Output option is selected. You cannot filter individual SEERs or SEER classes.

Filtering by severity level

The following table describes the filtering possibilities if SEER filtering is set using the severity level only.

Minimum Severity Level	SEERs sent to Message Trigger Mailbox
None	Only those SEERs which have the Message Trigger Field set to YES in the SEER Remap Table.
Critical	Only critical SEERs. This is the default value.
Major	Only major and critical SEERs.
Minor	Minor, major, and critical SEERs. <i>Note:</i> An appropriate warning appears if Minor is selected, as there is a possibility of flooding the Message Trigger Mailbox at this level of SEER.

Filtering by SEER type

The following table describes the filtering possibilities if SEER filtering is set according to the SEER type only.

SEER type	SEERs sent to Message Trigger Mailbox
Error	Error SEERs only. Error level SEERs may indicate a system problem which can be corrected by the administrator, perhaps with the assistance of technical support.
Admin	Admin and Error SEERs only. The ADMIN level of filtering is designed to allow the administrator to concentrate on those SEERs which are important, and not overload the administrator with informational SEERs. This will eliminate the nightly audit SEERs, and others which do not require the attention of the typical system administrator.

Filtering by severity and SEER type

When multiple filtering parameters are set, only those SEERs which pass through both filters are sent to the Message Trigger Mailbox.

For example, if the severity level is set to Critical and the SEER type is set to Error only Critical Error type SEERs will be sent to the Message Trigger Mailbox.

SEER Configuration screen

This is an example of the SEER Configuration screen.

System Event and Error Reports	
SEER Configuration	
Message Trigger Mailboxes:	
Mailbox:	7555
Mailbox:	7556
SEER Printer Output:	None Filtered Unfiltered
SEER Throttle Threshold Count:	5
SEER Escalation Threshold Count:	0
Throttle Interval (hh:mm):	00:05
Escalation Interval (hh:mm):	00:05
SEER Filters:	
SEER Severity Threshold:	None Critical Major Minor
SEER Type Threshold:	Error Admin
Select a softkey>	
Save	Cancel

Field descriptions

The following table describes the fields used for SEER filtering in the SEER Configuration screen.

SEER Filters

Description	This read-only field indicates that the remaining fields in the screen are applicable to the filter which determines whether a SEER is sent to the Message Trigger Mailbox or to the printer, or both.
-------------	--

SEER Severity Threshold

Description	This field is used to specify the minimum severity level a SEER must have to be sent to the Message Trigger Mailbox and/or the SEER printer. If None is selected, only SEERs that have the Message Trigger Field set to Yes in the SEER Remap Table are sent.
Options	None, Critical, Major, or Minor
Default	Critical

SEER Severity Threshold

Description	This field is used to specify the SEER type a SEER must have to be sent to the Message Trigger Mailbox and/or the SEER printer.
Options	Error and Admin
Default	Admin

Setting SEER filtering To set SEERs filtering, follow these steps.

Starting Point: The Main Menu

Step Action

- 1 Select System Status and Maintenance.
Result: The System Status and Maintenance screen is displayed.
 - 2 Select System Event and Error Reports from the menu.
Result: The System Event and Error Reports screen is displayed.
 - 3 Select SEER Configuration.
Result: The SEER Configuration screen is displayed.
 - 4 In the SEER Severity Threshold field, select the severity.
 - 5 In the SEER Type Threshold field, select the type of SEER that you want filtered.
 - 6 Press the [Save] softkey to save your choices.
Result: The changes are saved and you are returned to the System Event and Error Reports menu.
Press the [Cancel] softkey to cancel changes to the SEER configuration.
Result: The changes are cancelled and you are returned to the System Event and Error Reports menu.
-

Using SEER triggering

Introduction

SEER triggering is used so that the system administrator can be paged when a SEER generated by Meridian Mail Compact Option meets filtering and throttling criteria used for the Message Trigger Mailbox.

The administrator can specify up to two mailbox numbers that will receive a message if a SEER meets the requirements to be sent to the SEER printer when filtered output is selected. SEER filtering can be bypassed by specifying Yes for the Message Trigger field for the SEER in the SEER Remap Table. The message is tagged as urgent and includes the SEER number, severity, and type.

Remote Notification can be configured for the mailbox to allow a support person to be notified immediately of the occurrence of the SEER by page or phone.

SEER Configuration screen

This is an example of the SEER Configuration screen.

System Event and Error Reports	
SEER Configuration	
Message Trigger Mailboxes:	
Mailbox:	7555
Mailbox:	7556
SEER Printer Output:	None Filtered Unfiltered
SEER Throttle Threshold Count:	5
SEER Escalation Threshold Count:	0
Throttle Interval (hh:mm):	00:05
Escalation Interval (hh:mm):	00:05
SEER Filters:	
SEER Severity Threshold:	None Critical Major Minor
SEER Type Threshold:	Error Admin
Select a softkey>	
Save	Cancel

Field descriptions

The following table describes the fields used for SEER triggering in the SEER Configuration screen.

Message Trigger Mailboxes

Description	This read-only field indicates that the next pair of fields in the screen are applicable to the configuration of the Message Trigger Mailboxes. When a SEER occurs that meets the Trigger requirements (as set in the SEER Filters fields), a message containing the SEER number and severity is sent to the mailbox specified belonging to the corresponding customer group specified. (For SEERs related to the Hacker Tracker feature, the CLID and mailbox/dialed number are included.) These mailboxes can be configured with Remote Notification to page or phone a person when the message arrives in the mailbox.
-------------	---

Customer Number

Description	The customer number that contains the mailbox that you want to set as the Message Trigger mailbox.
Default	1

Mailbox

Description	This is the mailbox number to which the SEER trigger message is sent when the SEER triggering criteria are met. Validation is performed on the mailbox number to ensure its existence. This mailbox should be a local voice user mailbox.
Default	The field is blank.

Procedure

To set SEERs triggering, follow these steps.

Starting Point: The Main Menu

Step	Action
1	Select System Status and Maintenance. Result: The System Status and Maintenance screen is displayed.
2	Select System Event and Error Reports from the menu. Result: The System Event and Error Reports screen is displayed.
3	Select SEER Configuration. Result: The SEER Configuration screen is displayed.
4	In the Message Trigger Mailboxes field, enter the mailbox or mailboxes where the message is to be sent.
5	Check that the correct SEERs Filters have been set. (see "Setting SEER filtering" on page 28-36.)
6	Press the [Save] softkey to save your choices. Result: The changes are saved and you are returned to the System Event and Error Reports Menu. Press the [Cancel] softkey to cancel changes to the SEER configuration. Result: The changes are cancelled and you are returned to the System Event and Error Reports menu.

SEERs printing

Introduction This section describes setting up SEERs printing in the SEERs configuration screen.

SEER Configuration screen This is an example of the SEER Configuration screen.

System Event and Error Reports

SEER Configuration

Message Trigger Mailboxes:

Mailbox: 7555

Mailbox: 7556

SEER Printer Output:

None **Filtered** Unfiltered

SEER Throttle Threshold Count: 5

Throttle Interval (hh:mm): 00:05

SEER Escalation Threshold Count: 0

Escalation Interval (hh:mm): 00:05

SEER Filters:

SEER Severity Threshold: None **Critical** Major Minor

SEER Type Threshold: Error **Admin**

Select a softkey>

Save

Cancel

Field descriptions

The following table describes the field used for setting up SEER printing in the SEER Configuration screen.

SEER Printer Output

Description	This field is used to indicate whether SEER printing should be turned on or off and whether unfiltered SEERs are printed or not.
Options	Filtered, Unfiltered, None
Default	Unfiltered

Setting SEERs printing

To set up SEERs printing, follow these steps.

Starting Point: The Main Menu

Step Action

- 1 Select System Status and Maintenance.
Result: The System Status and Maintenance screen is displayed.
 - 2 Select System Event and Error Reports from the menu.
Result: The System Event and Error Reports screen is displayed.
 - 3 Select SEER Configuration.
Result: The SEER Configuration screen is displayed.
 - 4 In the SEER Printer Output field, select None, Filtered, or Unfiltered.
 - 5 Press the [Save] softkey to save your choice.
Result: The changes are saved and you are returned to the System Event and Error Report screen.
Press the [Cancel] softkey to cancel changes to the SEER configuration.
Result: The changes are cancelled and you are returned to the System Event and Error Reports menu.
-

Setting the SEER printer port name

Introduction Use the SEER printer port name field in the General Options screen to allow SEER printing on a printer other than the SEER console printer.

General Options screen This is an example of the General Options screen.

General Administration

MORE ABOVE

General Options

Meridian Mail Networking

Class of Service Selection: _ _ _ _ _

Attendant DN: 0

Date Format for Administration
and Maintenance Reports: mm/dd/yy yy/mm/dd dd/mm/yy

Valid printer port/device names can be viewed by selecting View/Modify for
each printer from Data Port Configuration in the Hardware Administration menu.

SEER Printer Port Name: (Blank implies the console port)

Reports Printer Port Name: (Blank implies the console port)

Select a softkey >

Save

Cancel

Field description This table describes the SEER Printer Port Name field.

SEER Printer Port Name	
Description	This is the printer port to which the SEER printer is connected. Leave this field blank.
Default	The default is blank. If this field is left blank, the SEERs will print to the console printer port.
Maximum length	The printer port name may consist of a maximum of 12 alphanumeric characters.

Procedure

To set the SEER printer port name value, follow these steps.

Note: Remember that not specifying a printer port name implies sending the SEERS printing to the console.

Starting Point: The Main Menu

Step Action

-
- | | |
|---|---|
| 1 | Select General Administration from the Main Menu.
Result: The General Administration screen is displayed. |
| 2 | Select General Options from the General Administration menu.
Result: The General Options screen is displayed. |
| 3 | Use the cursor keys to move to the SEER printer name field. |
| 4 | Make sure this field is blank. If the field is not blank, delete what is there .
Note: This will make sure that SEER printing is done on the console. |
| 5 | Use the softkeys to save or cancel the changes. <ul style="list-style-type: none">• Press [Save].
Result: The changes are saved, and you are returned to the General Administration screen.• Press [Cancel].
Result: The changes are not saved, and you are returned to the General Administration screen. |
-

Chapter 29

Operational Measurements

In this chapter

<u>Overview</u>	<u>29-2</u>
<u>Section A: Overview of Operational Measurements (OM)</u>	<u>29-3</u>
<u>Section B: Setting up Operational Measurements</u>	<u>29-9</u>
<u>Section C: Interpreting Operational Measurements</u>	<u>29-23</u>

Overview

Introduction

This chapter describes Operational Measurement (OM) reports and the procedures required to gather, store, and analyze OM information.

[Section A: Overview of Operational Measurements \(OM\)](#) describes Operational Measurements and how they are useful.

[Section B: Setting up Operational Measurements](#) provides information required to set up Meridian Mail Compact Option so that the Operational Measurements data is gathered and stored.

[Section C: Interpreting Operational Measurements](#) provides procedures and guidelines for interpreting Operational Measurement reports.

Section A **Overview of Operational Measurements (OM)**

In this section

[Overview](#)

[29-4](#)

[What are Operational Measurements?](#)

[29-5](#)

[How Operational Measurements are useful](#)

[29-6](#)

Overview

Introduction

This section describes Operational Measurements and provides information about their use.

What are Operational Measurements?

Introduction

The Operational Measurement (OM) reports allow administrators and Northern Telecom (Nortel) support staff to study how a Meridian Mail Compact Option system is being used. These reports may be used to determine if a change in the system is required to improve the level of service provided by Meridian Mail Compact Option. For example, if overall traffic on the system is higher than was originally anticipated, a channel expansion may be necessary.

OM reports also show which features are being used a lot, and which features are not being used at all. OM reports can also reveal potential technical problems with the system, such as low disk space (the amount of disk space affects Meridian Mail Compact Option's ability to store messages and perform its functions).

Traffic reports

Traffic reports shows how much the system is being used. The reports identify the number of calls processed, and the number of times users log in to Meridian Mail Compact Option or access particular features such as Voice Messaging and Voice Menu applications. For detailed descriptions, examples, and analyses of available traffic reports, [see Chapter 30, "Operational Measurements traffic reports"](#).

User Usage reports

User Usage reports monitor how specific users employ voice messaging. Information is broken down to show user activity on a daily basis. For detailed descriptions, examples, and analyses of User Usage reports, [see Chapter 31, "User Usage reports"](#).

How Operational Measurements are useful

Overview

The information that follows describes ways of using Operational Measurements (OM) report statistics.

Using OM to monitor system usage

You can use OM reports to monitor how the system is being used. For example, you can use these reports to determine which features are being used and which are not, and if the use of the system matches what the expectations were when the system size was being determined. If your Meridian Mail Compact Option system is busier than was anticipated, then you may need to expand the system.

Using OM to detect potential system problems

Similarly, OM reports can also be used to identify potential system problems, and possibly the cause of the problems. Although you should always use input from the users of the system to help determine if there is a problem, OM reports provide more definite data with which to work.

Example

If callers or users complain that they cannot access the mail system, channels may be tied up or disk space may be low. OM reports can help you determine if the problem is with system capacity or inefficient usage.

Potential problems that can be detected using OM

Some of the potential problems that can be detected through OM reports are discussed in the following examples.

Example 1: Disk space low

If the voice space used on a disk volume is consistently over your disk usage warning level, then disk space is getting low. Steps should be taken to reduce the voice space used. Check the Voice Space Used column of the Disk Usage Detail report and [see “Analyzing the Disk Usage Detail report” on page 30-40](#) in Chapter 30 .

**Potential problems,
cont'd****Example 2: Channels busy**

The Channel Usage Detail report shows the number of calls and voice mail usage (in CCS) per channel. If the number of calls is high or the average message length is exceptionally long, the channels may be too busy to handle all incoming calls. As a result, users may not be able to access Meridian Mail Compact Option. Several of the “Analyzing” sections that follow the sample reports refer to analyzing or dealing with high traffic problems.

Example 3: Inefficient usage

The Services Summary Traffic report provides an overview of how much your Meridian Mail Compact Option features are being used. If you notice that some features are not being used at all, this may indicate that the users are not aware of the feature (or do not know how to use it), or that the feature is not required. The users may require more training. Use broadcast messages to give brief pointers or to inform users of available training courses or material.

Example 4: Unauthorized usage

If the Thru-Dial feature is being accessed more frequently during off-hours or if the average length of the Thru-Dial sessions is long, this may indicate that unauthorized users (hackers) are accessing your Meridian Mail Compact Option system in order to use the Thru-Dial feature (for example, to make long distance calls). If you notice unusual use of the Thru-Dial feature, review the dialing restrictions for Thru-Dial. Also, if you are using an access password for Thru-Dial, change the access password and continue to monitor the Thru-Dial usage. For more information, see “[Services Summary report](#)” in Chapter 30, “Operational Measurements traffic reports” for the number of Thru-Dial sessions and the average session lengths during specific time periods.

Using OM as a billing tool

As an accounting and billing tool, Operational Measurements are used to generate the daily user billing files (for local activity). Use the User Usage reports to compile data for billing.

If your organization does not bill users of Meridian Mail Compact Option, you may not need to use the User Usage component of Operational Measurements. However, it can also be used for tracking problems or history or for security reasons (for example, who is logging on and receiving messages).

Using OM as a capacity planning tool

As a capacity planning tool, Operational Measurements are used to generate traffic reports that you subsequently analyze to determine whether your system requires an upgrade either in disk storage or channel capacity. If your organization's use of Meridian Mail Compact Option is fairly stable, you need only use the traffic measurement component of Operational Measurements on an infrequent basis to verify that the system's resources are adequate for your needs.

Section B **Setting up Operational Measurements**

In this section

<u>Overview</u>	<u>29-10</u>
<u>Using the Operational Measurements menu</u>	<u>29-11</u>
<u>Calculating disk space required for OM data storage</u>	<u>29-13</u>
<u>Operational Measurements Options screen</u>	<u>29-16</u>
<u>Fields in the Operational Measurement Options screen</u>	<u>29-18</u>
<u>Setting Meridian Mail Compact Option to collect and receive data</u>	<u>29-21</u>

Overview

Introduction

This section describes the procedures for setting up Meridian Mail Compact Option Operational Measurements. These procedures include the following:

- using the Operational Measurements menu
- calculating disk space required for OM data storage
- setting Meridian Mail Compact Option to collect and receive data

Using the Operational Measurements menu

Introduction

The Operational Measurements menu is used to access the screens necessary for

- viewing or changing the parameters related to the collection and storage of OM data
- viewing and printing the OM reports available on your system

Operational Measurements menu

The following is an example of the Operational Measurements menu.

The screenshot shows a terminal window titled "Operational Measurements". Inside the window, there is a list of two options: "1 Operational Measurement Options" and "2 Traffic Reports". Below the list, there is a prompt "Select an item > =" followed by a cursor. At the bottom of the window, there is a row of five buttons. The first button is labeled "Exit", and the other four buttons are unlabeled.

```
Operational Measurements
1 Operational Measurement Options
2 Traffic Reports

Select an item > =
Exit
```

Procedure

To use the Operational Measurements menu, follow these steps.

Starting Point: The Main Menu

Step Action

- | | |
|---|--|
| 1 | Select Operational Measurements.
Result: The Operational Measurements menu is displayed. |
| 2 | To choose an item from the menu, enter the number and press <Return>.
Result: The appropriate screen is displayed.
Note: To return to the Main Menu at any time, press the [Exit] softkey twice. |
-

Calculating disk space required for OM data storage

Introduction

Use this section to calculate the disk space required for Operational Measurement data storage.

Understanding system disk capacity requirements

Planning for system disk capacity for OM data is very important. Because OM data must be stored in a fixed amount of disk space, it is periodically overwritten by new data. You must ensure that you view or print any vital information before it is overwritten (the Operational Measurement Options screen defines how long data is stored). You must also ensure that OM data does not exceed the available storage capacity.

ATTENTION

If total storage exceeds 100 percent, you will run out of disk space. You should attempt to keep your disk usage for OM data below 60 percent to allow sufficient space for the rest of the system.

Should your calculations yield a result greater than 100 percent, reduce the number of days for which traffic and/or user usage data is stored, and repeat your calculations. The values presented in the [“Storage requirement estimates” on page 29-15](#) are based on typical parameters for various Meridian Mail Compact Option configurations. Should your system deviate markedly in any of these assumed traffic patterns, you will need to experiment to determine what your system can accommodate.

Procedure

To calculate the total disk storage required for OM data, follow these steps. As you follow these steps, refer to the [“Storage requirement estimates” on page 29-15](#).

Step Action

- 1 Determine the number of days that you wish to store the OM traffic data and user usage data before it is overwritten.
Make a note of the number of days you decide on so that you can enter these values in the Operation Measurement Options screen ([see "Operational Measurements Options screen" on page 29-16](#)).
- 2 Use the table ["Storage requirement estimates" on page 29-15](#) to determine the billing data cost and the user usage data cost. The "data cost" refers to the percentage of disk volume VS1 text space required.
For example, an 8-port, 24-hour system would have a billing data cost of 1.04% and a user usage data cost of 0.12%.
- 3 Multiply the billing data cost by three (two days plus the current day's data are stored).
For example, $3 \times 1.04\%$
- 4 Multiply the number of traffic days by 1 percent to the result of [step 3](#).
For example, $8 \times 3.12\%$
- 5 Multiply the number of user usage days by the user usage data cost.
For example, $31 \times 0.12\%$
- 6 Add the results from [step 3](#), [step 4](#), and [step 5](#).

Example

For an 8-port, 24-hour system, and 31 user usage days, and 8 days of traffic stored:

number of days traffic data is stored = 8

number of days user usage data is stored = 31

billing data cost = 1.04%

user usage data cost = 0.12%

Total storage = $(3 \times 2.89\%) + (8 \times 3.12\%) + (31 \times 0.36\%) = 20.08\%$

Storage requirement estimates

Use this table to estimate the amount of storage required for each operational measurement. Billing data cost and user usage data cost refer to the percentage of VS1 text space used.

System type	Number of ports	Billing data cost	User usage data cost
Compact Option			
24 hr	4	0.52%	0.06%
24 hr	8	1.04%	0.12%

Traffic assumptions

The preceding table is based on a typical system with an eight-hour business day, and the following traffic:

- 25 percent of the time at busy hour traffic (2 hours)
- 5 percent of the time at greater than busy hour traffic (25 minutes)
- 70 percent of the time at less than 75 percent of busy hour traffic (5 hours and 35 minutes)
- average call holding time of 40 seconds

Operational Measurements Options screen

Introduction

The Operational Measurement Options screen is used by the system administrator to define how system and user statistics are collected. This includes the time at which traffic data collection begins and ends every day, how often collected traffic statistics are written to disk, and whether or not traffic data, user usage data, or audit trail data is collected. Also included are the number of days of data that are stored for traffic, user usage data, and audit trail reports, and the percentage at which audit trail data collection will automatically be disabled.

Operational Measurement Options screen

The following is an example of the Operational Measurement Options screen.

Part 1

Operational Measurements

Operational Measurement Options

Collect Traffic Data: Disabled **Enabled**

Traffic Period Start (hh:mm): 01:00

Traffic Period End (hh:mm): 01:00

Traffic Commit Interval (hh:mm): 01:00

Number of days of Traffic Data stored: 8

Collect User Usage/Session Trace Data: Disabled **Enabled**

Number of days of User Usage Data stored: 31

[MORE BELOW](#)

Save Cancel [] [] []

Part 2

Operational Measurements		MORE ABOVE	
Operational Measurement Options			
Traffic Period End (hh:mm):	<u>01:00</u>		
Traffic Commit Interval (hh:mm):	<u>01:00</u>		
Number of days of Traffic Data stored:	<u>8</u>		
Collect User Usage/Session Trace Data:	Disabled Enabled		
Number of days of User Usage Data stored:	<u>31</u>		
Save	Cancel		

Fields in the Operational Measurement Options screen

Overview	The following section describes the fields on the Operational Measurement Options screen.
Collect Traffic Data	When this field is Enabled, a statistical record of voice messaging and other voice services, voice channel traffic, Enterprise Networking message traffic, and disk space usage will be collected and stored on disk. The default is Enabled.
Traffic Period Start (hh:mm)	This is for the time at which data begins to be collected, based on the 24-hour clock. The valid range is from 00:00 to 23:30. You may enter values only in half-hour increments, for example, 01:00, 01:30; 02:00, 02:30, etc. The default is 01:00.
Traffic Period End (hh:mm)	This is for the time at which data stops being collected, based on the 24-hour clock. To continuously collect traffic data, set the Period Start field equal to the Period End field (that is, Period Start = 01:00 and Period End = 01:00). In this manner, data will be collected 24 hours a day. The valid range is 00:00 to 23:30. You may enter values only in half-hour increments, for example, 01:00, 01:30; 02:00, and 02:30. The default is 01:00.
Traffic Commit Interval (hh:mm)	The value in this field determines how often the collected traffic statistics are written to the hard disk within the defined traffic period. The default is 01:00. The valid range is from 00:00 to 23:30. Commit intervals should be entered in half-hour increments and be equally divisible into the period range. The smallest allowed interval is 30 minutes. However, a one-hour interval will provide similar granularity of data and will require only half as many writes to disk (resulting in less disk usage) as the 30-minute interval.

Example

If the Collect Traffic Data field is set to Enabled and

Traffic Period Start = 08:00,

Traffic Period Stop = 17:00,

Traffic Commit Interval = 1:30,

traffic data is collected between 8:00 a.m. and 5:00 p.m. daily, and traffic reports are written to the hard disk every 1 hour and 30 minutes during this period. The first report is written out at 9:30 a.m. and the last one is written out at 5:00 p.m.

Note: The traffic commit interval can be set to 24 hours.

However, an interval greater than two hours is not recommended because the accumulated numbers may be too large to be accommodated by the fields in the report screens. If a number is too large, >999 is displayed in the field to indicate overflow. Furthermore, any data that is not written to disk is lost if a system reboot occurs.

**Number of days of
Traffic Data stored**

This field determines the number of days that traffic data is maintained before being overwritten by new traffic data.

Example

If this field is set to 8, on the 9th day you will not be able to view traffic data collected on the first day as it will have been overwritten, but you will be able to view the data from the remaining eight days. The old traffic data is removed from the disk at 1:20 a.m. each day. The data for the current day is not included in the number of days of traffic data stored. The valid range is 1 to 8 days. The default is 8 days.

**Collect User Usage/
Session Trace Data**

This field controls the collection of both user usage data and session trace data. Session trace data includes detailed voice messaging session statistics. The session statistics are kept for two days, regardless of how long you define user usage data to be stored. (For example, on Monday you can view Saturday's

data, but not Friday's data.) Session reports can be accessed using the Session Trace tool (refer to *System Administration Tools* [NTP 555-7001-305]). The default is Enabled.

**Number of days of
User Usage Data
stored**

This field controls the number of days of user usage summary statistics data that is kept on the hard disk before it is overwritten. The range is from 1 to 63. The default is 31.

Setting Meridian Mail Compact Option to collect and receive data

Introduction

Use the Operational Measurement Options screen to define the parameters for collecting the OM information from your Meridian Mail Compact Option system.

Procedure

To set the Operational Measurement parameters, follow these steps.

Starting Point: The Operational Measurements menu

Step Action

- 1 Select Operational Measurements.
Result: The Operational Measurement Options screen appears.
 - 2 Set the parameters as required. For information on setting these parameters, [see "Fields in the Operational Measurement Options screen" on page 29-18.](#)
 - 3 Choose [step 4](#) to save the changes or [step 5](#) to cancel.
 - 4 Press [Save].
Result: The changes are saved and the Operational Measurements menu is redisplayed.
Note: Any saved changes force all traffic data to be committed at the time of the save, regardless of the interval and period specified. This action will also create an irregular time period (the time up to the save) that will appear on the traffic reports. Also, a SEER is issued to indicate that the changes have taken effect.
 - 5 Press [Cancel].
Result: Any changes you have made are discarded; the Operational Measurements menu is redisplayed.
-

Section C **Interpreting Operational Measurements**

In this section

[Overview](#)

[29-24](#)

[Calculating centa-call seconds](#)

[29-25](#)

[Interpretation guidelines](#)

[29-26](#)

Overview

Introduction

This section describes the calculation of centa-call seconds and provides guidelines that are useful when interpreting OM reports.

Calculating centa-call seconds

Introduction

Many of the OM reports provide usage time in centa-call seconds. centa-call seconds (CCS), or hundreds of call seconds, can be calculated using the formula in this section.

Definition

CCS is a traffic measurement statistic. One CCS is equal to 100 seconds of call connection time per hour. The CCS is based on the total number of call seconds, not the average length, multiplied by the number of accesses.

Formula

To calculate the CCS value, use the following formula.

$$CCS = \frac{60 \text{ minutes}}{\text{interval (in minutes)}} \times \frac{\text{total call seconds}}{100 \text{ seconds}}$$

The first part of the formula compensates for intervals that are not one hour.

Examples

320 total call seconds during a half-hour interval produces the following CCS:

$$CCS = \frac{60 \text{ minutes}}{30 \text{ minutes}} \times \frac{320 \text{ seconds}}{100 \text{ seconds}} = 2 \times 3.2 = 6.4 \approx 6$$

If the interval is one hour, the first part of the formula can be ignored. For example, 320 total call seconds over a one-hour interval produces the following CCS:

$$CCS = \frac{60 \text{ minutes}}{60 \text{ minutes}} \times \frac{320 \text{ seconds}}{100 \text{ seconds}} = 1 \times 3.2 = 3.2 \approx 3$$

Interpretation guidelines

Introduction	When interpreting the OM reports, consider the following guidelines.
Service counts	Look not only at the counts for each service but also at the relationship between the counts for different services. Example Both Express Messaging and Call Answering features allow messages to be left in the system. Therefore, both counts should be taken into consideration when looking at the total number of incoming messages during a particular time period.
System size	Know the size of the system — both channels and disk capacity. Smaller systems will be much more sensitive to high traffic counts and durations than larger systems.
How your organization uses the system	Know how your organization uses the system. Many of the counts and durations will have a direct relationship to how the organization uses the system as part of its overall operation (for example, voice messaging only, auto attendant, menus, and so on). If you do not know how the organization functions, find someone within the organization who does, and interpret the information together. That person will provide the necessary knowledge about how the organization works, and you can provide the information about the system.
If there is unusual system activity	Make sure you have taken any unusual operational activity into consideration. For example, is it a national holiday? an election day? or was there a major news event recently? Such unusual activities

may cause an abnormal usage of your system that will distort the figures.

Report relationships

Many reports relate to one another.

For instance, the Services Summary report provides a summary of the voice menus, announcement traffic, and other services, but the Services Detail report provides much more detail about particular services. Know what reports a system can produce, and know which ones relate to others. Read through each report and move back and forth through the information, making sure you have optimized the interpretation and analysis process.

User consultation

Consult the users of the system to gain further insight into a report's findings.

Find out how the system is working for the users and if they have any problems to report. Some apparent system problems may be the result of improper usage of the system (perhaps due to lack of training or awareness of certain system features).

Impact of new features or services

Consider how long a feature or service has been in operation.

When something is new, it may generate more traffic than normal as a result of curiosity, or it may generate less traffic due to lack of familiarity with the new feature, so the initial figures may be distorted.

Working with multiple Meridian Mail Compact Option systems

If you are working with numerous Meridian Mail Compact Option systems, remember that each Meridian Mail Compact Option system is unique.

Make sure you apply all the previously described guidelines separately to each system.

Chapter 30

Operational Measurements traffic reports

In this chapter

<u>Overview</u>	<u>30-2</u>
<u>Section A: Generating traffic reports</u>	<u>30-3</u>
<u>Section B: Traffic reports</u>	<u>30-9</u>

Overview

Introduction

This chapter is devoted to Operational Measurement (OM) traffic reports. These reports show how much the system is being used. The reports identify the number of calls processed, and the number of times a user logs in to Meridian Mail Compact Option or accesses particular features such as Voice Messaging and Voice Menu applications.

[Section A: Generating traffic reports](#) describes how to generate, view, and print OM traffic reports. The section also describes the Traffic Reports screen, which lists the reports that can be generated.

[Section B: Traffic reports](#) provides descriptions and analyses for all of these reports.

Section A **Generating traffic reports**

In this section

<u>Overview</u>	<u>30-4</u>
<u>Traffic Reports screen</u>	<u>30-5</u>
<u>Generating traffic reports</u>	<u>30-7</u>

Overview

Introduction

This section describes the Traffic Reports screen and the procedure for generating, viewing, and printing traffic reports. All traffic reports that can be generated are listed on the Traffic Report screen. For descriptions and analyses for all of the traffic reports, see [Section B: Traffic reports](#) on [page 30-9](#).

Traffic Reports screen

Introduction

This section describes the Traffic Reports screen. Access the Traffic Reports screen by selecting Traffic Reports on the Operational Measurements screen.

The screen

The following is an example of the Traffic Reports screen.

The screenshot shows a terminal window titled "Operational Measurements" with a sub-header "Traffic Reports". It contains a list of services with "No" and "Yes" options, followed by fields for "Report Start" and "Report End" with instructions. At the bottom, it says "Select a softkey >" and displays five buttons: "Exit", a blank button, "View Reports", "Print Reports", and another blank button.

Traffic Reports	
Services Summary:	☐ No ☐ Yes
Voice Messaging Detail:	☐ No ☐ Yes
Channel Usage Detail:	☐ No ☐ Yes
Services Detail:	☐ No ☐ Yes
Networking Detail:	☐ No ☐ Yes
Disk Usage Detail:	☐ No ☐ Yes

Report Start (mm/dd/yy hh:mm): _____ (or blank for oldest)
Report End (mm/dd/yy hh:mm): _____ (or blank for newest)

Select a softkey >

Exit [] View Reports Print Reports []

Available traffic reports

Each line in the Traffic Reports screen represents a specific type of report. The following is a list of the available traffic reports. Some of the reports are available only if additional features are installed on your Meridian Mail Compact Option system. For descriptions and analyses of these reports see [Section B: Traffic reports.](#)

- Services Summary
- Voice Messaging Detail
- Channel Usage Detail
- Services Detail (if the Voice Menus feature is installed)
- Networking Detail (if Meridian Mail Networking is installed)
- Disk Usage Detail

Generating traffic reports

Introduction

This section describes the procedure for generating traffic reports. The Traffic Reports screen allows you to choose which reports you want to view and print. Also, you have the option of choosing a Report Start and Report End date and time.

Procedure

To generate traffic reports, follow these steps.

Starting Point: The Operational Measurements screen

Step Action

- 1 Select Traffic Reports from the Operational Measurements screen.
Result: The Traffic Reports screen displays.
- 2 Move the cursor to the report titles you wish to view or print. Use the arrow keys to toggle the field value to Yes.
- 3 (This step is optional.) Specify start and stop times for the report period by entering the values in the Report Start (mm/dd/yy hh:mm) and Report End (mm/dd/yy hh:mm) fields. (The format mm/dd/yy hh:mm is the default. The format can be changed in General Administration, General Options. For more information, [see Chapter 13, "General options"](#).
Note: The values you enter are based on the 24-hour clock. The valid range is from 00:00 to 23:59 (12:00 midnight to 11:59 p.m.). If the Report Start and Report End fields are left blank, the defaults of start of available data and end of available data are used respectively.
- 4 Go to [step 5](#) to view the reports on the terminal, [step 6](#) to print the reports, or [step 7](#) to cancel.

Step Action

- 5 Press [View Reports].

Result: The selected report screens are displayed one at a time. Follow the instructions in the table below to view the next report, exit the screen, or view the next page in the same report.

IF you want to	THEN press softkey
leave the current report and go to the next report	[Next Report].
exit all reports and return to the Traffic Reports screen	[Exit].
view subsequent pages of the current report (if available)	[Next Page].

For descriptive and analytical information on individual reports, see [Section B: Traffic reports](#) on [page 30-9](#).

- 6 Press [Print Reports].

Result: You are prompted to ensure the printer is ready and online.

During printing, you have two options available.

IF you want to	THEN press softkey
print the reports	[Continue Printing].
cancel printing at any time	[Cancel Printing].

Note: There may be some delay before control is returned to the screen because it waits for the printer to stop printing.

- 7 Press [Exit].

Result: The Operational Measurements menu is displayed again.

Section B **Traffic reports**

In this section

<u>Overview</u>	<u>30-11</u>
<u>Services Summary report</u>	<u>30-12</u>
<u>Fields in the Services Summary report</u>	<u>30-13</u>
<u>Analyzing the Services Summary report</u>	<u>30-15</u>
<u>Voice Messaging Detail report</u>	<u>30-18</u>
<u>Fields in the Voice Messaging Detail report</u>	<u>30-19</u>
<u>Analyzing the Voice Messaging Detail report</u>	<u>30-21</u>
<u>Channel Usage Detail report</u>	<u>30-22</u>
<u>Fields in the Channel Usage Detail report</u>	<u>30-23</u>
<u>Analyzing the Channel Usage Detail report</u>	<u>30-25</u>
<u>Services Detail report</u>	<u>30-26</u>
<u>Fields in the Services Detail report</u>	<u>30-27</u>
<u>Analyzing the Services Detail report</u>	<u>30-29</u>
<u>Networking Detail report</u>	<u>30-31</u>
<u>Fields in the Networking Detail report</u>	<u>30-32</u>
<u>Analyzing the Networking Detail report</u>	<u>30-36</u>

30-10 Operational Measurements traffic reports

<u>Disk Usage Detail report</u>	<u>30-38</u>
<u>Fields in the Disk Usage Detail report</u>	<u>30-39</u>
<u>Analyzing the Disk Usage Detail report</u>	<u>30-40</u>

Overview

Introduction

This section provides descriptions and analyses of each traffic report. Included are an example report screen and field descriptions.

Services Summary report

Overview

The Services Summary report provides statistics for each of the services installed in your system. The total number of times a user dialed a service (number of accesses), and the average length of each access are given.

The screen

The following is an example of the Services Summary report screen.

Operational Measurements				
Service Summary				
Interval Start-End	Service Name	Number of Accesses	Average Length (in seconds)	Voice Mail Usage (in CCS)
5/01 18:00-19:00	Thru-Dial	0	0	0
	Voice Menus	0	0	0
	Voice Messaging	0	0	0
	Call Answering	0	0	0
	Express Messaging	0	0	0
	Voice Announcements	0	0	0
	Networking	0	0	0
	Voice Prompt Admin	0	0	0
Select a softkey > _				
Exit	Next Report		Next Page	

Fields in the Services Summary report

Interval Start-End Data are divided into intervals. The length of the interval depends on the entry made in the Traffic Commit Interval field in the Operational Measurement Options screen. The number of intervals displayed depends on the entries made in the Traffic Period Start and Traffic Period End fields in the Operational Measurement Options screen.

Example

If data is collected 24 hours a day (from 01:00 to 01:00), and the commit interval is one hour, the report will divide the data into 24 intervals for each day included in the report. The amount of data displayed in this report depends on the Report Start and Report End entries that were made in the Traffic Reports screen. If no report start and end dates and times were given, all data currently stored on disk are displayed.

Service Name This field displays the name of the service that was accessed.

Number of Accesses This field displays the number of calls (peg count) made to the corresponding service. The number of Thru-Dial accesses includes accesses to Voice Service Thru-Dial (automated attendants), Call Service Thru-Dial, and Logon Thru-Dial.

Note: If a call continues past the interval, the access is counted only in the second interval (when the call is completed), although the call length is properly divided between the two intervals.

Example 1

If a call starts ten minutes before the end of an interval, that ten minutes of call length is counted in that interval. If the same call continues for five minutes into the next interval, the five minutes is counted in the second interval. The number of accesses is increased by zero in the first interval and by one in

the second interval. The call is pegged in this way to match the way calls are tracked by the switch.

Example 2

If a call that spans two intervals is the only call to that service in those intervals, the number of accesses in the first interval would be zero while the number of accesses in the second interval would be one.

**Average Length
(in seconds)**

This field displays the average length of the corresponding voice service sessions during the specified interval.

**Voice Mail Usage
(in CCS)**

This field displays the amount of time that a Meridian Mail Compact Option service was active in the defined interval. The value is given in centa-call seconds (CCS), a traffic measurement statistic. One CCS is equal to 100 seconds of call connection time per hour. The CCS is based on the total number of call seconds, not the average length multiplied by the number of accesses.

Analyzing the Services Summary report

Introduction

Use the summary report, including the CCS values, to get an overall sense of which services are generating the most traffic and which are generating little or no traffic. Consider the example and the information that follows when doing your analysis.

Example

The second line in the sample report on [page 30-12](#) shows that 301 calls, with an average length of 12 seconds, were placed to the Voice Menu service for a total of 3612 seconds (301×12). This equates to 36 CCS in the one-hour interval. The CCS count is computed for the one-hour interval as follows:

$$CCS = \frac{3612 \text{ seconds}}{100 \text{ seconds}} = 36.12 \approx 36$$

A feature is not being used

This may mean that the feature is not working properly, or that the users are not aware of the feature and therefore do not use it.

Suggested action

After the administrator notices a low (or no) usage of a particular feature, it is up to the administrator to do additional research to determine if there is a technical problem with the feature, or if it simply is not being used, or if it is normal for the usage to be low for the observed time period.

If a particular feature is generating an unusually high amount of traffic

If a feature is generating an unusually high amount of traffic, you may encounter system performance problems such as no free channels.

Suggested actions

Run the report that goes with that service, if there is one, for more information. As the administrator, you may need to do more research beyond checking the OM reports to learn more about the nature of the problem to come up with a solution. For example, you need to determine if the high traffic level was due to some unusual event that affected your organization (if so, the high traffic would not be expected to continue).

If the high traffic for a particular feature is expected to continue, one solution may be to dedicate a channel to the feature so that the feature does not tie up the whole system. For more details on dedicating channels, see Chapter 22, "Configuring Meridian Mail Compact Option services". Another solution is to expand the system if overall traffic for the whole system is higher than what was originally anticipated for the system.

Check the average length for Voice Menu and Announcement accesses

Another area to check is the average length for Voice Menu and Announcement accesses ([see "Services Summary report" on page 30-12](#)).

Suggested action

If the average length is long, review your menus and announcements to see if they can be shortened or rearranged for more efficient use.

In menus, place the popular items first so that users do not need to stay on the line as long before the item they want is presented. If a menu has a long average length and it accesses an announcement, try to shorten the announcement.

High number of Call Answering accesses**Suggested action**

If the number of Call Answering accesses is high, check the logon count versus the number of times Call Answering has been accessed (the Voice Messaging Detail report gives the logon count).

If the logon count is low compared to the number of Call Answering accesses, this means that users are accumulating several messages before logging on to listen to them. Too many accumulated messages lowers the amount of available disk space to the point where overall system performance may be affected.

Users are having trouble logging in at a certain time**Suggested action**

If users are having trouble logging in to Meridian Mail Compact Option at a certain time, check the level of traffic for that time period.

You may have found your heavy traffic period or busy hour. If there is no way to reduce the traffic during that time period, you may need to expand your system.

The number of Thru-Dial accesses is unusually high

If you have an unusually high number of Thru-Dial accesses, this may be a sign of hackers present on your system.

Suggested actions

If you suspect hackers are accessing the Thru-Dial feature, first check how the Thru-Dial service is set up to see if the OM data are unusual. If your research suggests the possible presence of hackers, review the dialing restrictions for Thru-Dial. Also, if you are using an access password for Thru-Dial, change the access password and continue to monitor the Thru-Dial usage.

Voice Messaging Detail report

Introduction

The Voice Messaging Detail report provides information about logon sessions, Call Answering sessions, and messages composed during logon sessions. If data is unavailable for a given statistic, N/A (not available) is displayed instead of a value. For example, if the interval is one minute long, the system may interpret that interval as having zero length, so no data is available. A 1-minute interval may be created if you update and save the OM options, which forces all traffic data to be written to disk at that point and results in an irregular interval.

If a value is too large to fit in a field, >999 is displayed.

The screen

The following is an example of the Voice Messaging Detail report screen.

Operational Measurements										
Voice Messaging Detail (VM Logon, Call Answering and Express Messaging)										
Interval Start-End	Number of Calls		Number of Sessions		Session Length		Messages Created		Message Length	
	Int	Ext	EM/Ans	Log	Avg	Max	EM/Ans	Log	Avg	Max
5/01 18:00-19:00	0	0	0	0	0	0	0	0	0	0
5/01 19:00-20:00	0	0	0	0	0	0	0	0	0	0
5/01 20:00-21:00	0	0	0	0	0	0	0	0	0	0
5/01 21:00-22:00	0	0	0	0	0	0	0	0	0	0
5/01 22:00-23:00	0	0	0	0	0	0	0	0	0	0
5/01 23:00-00:00	0	0	0	0	0	0	0	0	0	0
5/02 00:00-01:00	0	0	0	0	0	0	0	0	0	0
5/02 01:00-02:00	0	0	0	0	0	0	0	0	0	0
5/02 02:00-03:00	0	0	0	0	0	0	0	0	0	0
5/02 03:00-04:00	0	0	0	0	0	0	0	0	0	0
5/02 04:00-05:00	0	0	0	0	0	0	0	0	0	0
5/02 05:00-06:00	0	0	0	0	0	0	0	0	0	0
5/02 06:00-07:00	0	0	0	0	0	0	0	0	0	0
Select a softkey > _										
Exit		Next Report				Next Page				

Fields in the Voice Messaging Detail report

Interval Start-End

Data are divided into intervals. The length of the interval depends on the entry made in the Traffic Commit Interval field in the Operational Measurement Options screen. The number of intervals displayed depends on the entries made in the Traffic Period Start and Traffic Period End fields in the Operational Measurement Options screen.

Example

If data are collected 24 hours a day (from 01:00 to 01:00), and the commit interval is one hour, the report will divide the data into 24 intervals for each day included in the report. The amount of data displayed in this report depends on the Report Start and Report End entries that were made in the Traffic Reports screen. If no report start and end dates and times were given, all data currently stored on disk are displayed.

Number of Calls (Int and Ext)

This field shows the number of Voice Messaging, Call Answering, or Express Messaging calls made. The data are displayed in the following subfields.

Int

This display indicates the number of calls made from inside the switch during the specified interval.

Ext

This display indicates the number of calls made from outside the switch during the specified interval.

**Number of Sessions
(EM/Ans and Log)**

This is the number of sessions in the interval.

EM/Ans

This display indicates the number of sessions used for Express Messaging and Call Answering services.

Log

This display indicates the number of time users logged into their mailboxes during the interval.

Note: The sum of the values in these two columns should equal the sum of the two Number of Calls values. To determine the number of messages that were actually received or created during these sessions, check the Messages Created fields.

**Session Length
(Avg and Max)**

This field indicates the average length and maximum length (in seconds) of Call Answering, Express Messaging, and logon sessions for the interval.

**Messages Created
(EM/Ans and Log)**

This field indicates the number of messages created during the interval.

EM/Ans

This display indicates the number of messages left during Express Messaging and Call Answering services.

Log

This display indicates the number of messages that were created (using the compose, forward, or reply command) during the interval.

**Message Length
(Avg and Max)**

This field indicates the average length and the maximum length (in seconds) of messages received and created during the interval. Since message length has an impact on disk storage, use this information to determine if enough disk space has been provisioned for voice messages.

Analyzing the Voice Messaging Detail report

Introduction

The first line in the sample report on [page 30-18](#) shows that 18 calls were placed to Meridian Mail Compact Option. Sixteen were logon sessions (for example, to compose, forward, or listen to messages). Two calls accessed the Express Messaging or Call Answering feature (an attempt to leave a message at another mailbox). If the number of sessions does not equal the number of calls, there is a problem with your system.

EM/Ans Sessions and Messages are similar in number

The number of EM/Ans sessions should match or be close to the number of EM/Ans messages created. When there are more EM/Ans sessions than EM/Ans messages created (as in the sample report), this means that during an Express Messaging session, or after reaching the Call Answering greeting, users are hanging up without leaving a message, or they are pressing 0 to transfer to an attendant. Either of these results in Express Messaging or Call Answering sessions but no messages created.

Suggested actions

If the disparity between the two numbers is high, the users may need some training on the use of Express Messaging and Call Answering. Also, users should review their greetings. If greetings are unfriendly or if instructions are too complex, this may be causing users to hang up without leaving a message.

There is a high numbers of calls and long messages

On this report, watch for high numbers of calls and long messages. Too many calls in a short period of time and users leaving long messages will tie up channels and prevent others from accessing Meridian Mail Compact Option.

Suggested action

You may need to expand your system.

Channel Usage Detail report

Introduction

The Channel Usage Detail report provides details about channel activity for incoming and outgoing calls, including average session lengths and CCS statistics.

The screen

The following is an example of the Channel Usage Detail report screen.

Operational Measurements							
Channel Usage Detail							
Interval	Start-End	Channel	Number of		Incoming	Outgoing	Voice
			Calls	Calls	Avg Length (in seconds)	Avg Length (in seconds)	Mail Usage (in CCS)
5/01	18:00-19:00	1	0	0	0	0	0.0
		2	0	0	0	0	0.0
		3	0	0	0	0	0.0
		4	0	0	0	0	0.0
		5	0	0	0	0	0.0
		6	0	0	0	0	0.0
		7	0	0	0	0	0.0
		8	0	0	0	0	0.0
		9	0	0	0	0	0.0
		10	0	0	0	0	0.0
		11	0	0	0	0	0.0
		12	0	0	0	0	0.0
		13	0	0	0	0	0.0
Select a softkey > _							
Exit		Next Report		Next Page			

Fields in the Channel Usage Detail report

Interval Start-End Data are divided into intervals. The length of the interval depends on the entry made in the Traffic Commit Interval field in the Operational Measurement Options screen. The number of intervals displayed depends on the entries made in the Traffic Period Start and Traffic Period End fields in the Operational Measurement Options screen.

Example

If data are collected 24 hours a day (from 01:00 to 01:00), and the commit interval is one hour, the report will divide the data into 24 intervals for each day included in the report. The amount of data displayed in this report depends on the Report Start and Report End entries that were made in the Traffic Reports screen. If no report start and end dates and times were given, all data currently stored on disk are displayed.

Channel This field indicates the channel being monitored.

Number of Incoming Calls This field indicates the number of incoming calls during the interval.

Number of Outgoing Calls This field indicates the number of outgoing calls during the interval.

Incoming Avg Length (in seconds) This field indicates the average length of incoming calls during the interval.

Outgoing Avg Length (in seconds) This field indicates the average length of outgoing calls during the interval.

**Voice Mail Usage
(in CCS)**

This field represents the amount of time in terms of CCS that a Meridian Mail Compact Option channel was active in the defined interval. CCS is a traffic measurement statistic. The value is displayed in the nearest one tenth of a CCS (for example, 11.0).

Note: There is a similar Voice Mail Usage field in the Services Summary Traffic report ([see “Services Summary report” on page 30-12](#)). However, because the two fields measure usage differently (one in terms of channels and the other in terms of voice services), there may be small differences between the two fields if you calculate the totals for the displayed values.

Analyzing the Channel Usage Detail report

Introduction

The CCS for each channel gives an indication of how busy each channel is. With Automated Call Distribution (ACD), the traffic (measured in CCS) should be evenly distributed across all channels over a lengthy period (for example, 12 hours).

Is channel traffic distributed equally?

Channels with short durations will have a higher number of calls than channels with long durations, but the average amount of traffic (for example, CCS) for each nondedicated channel should be similar.

Suggested action

If the traffic is not evenly distributed, check if all channels are working properly. If a channel has no traffic at all for the entire period of the report, this may indicate that the channel is out of service. If any channels are dedicated to a particular service, the number of calls for the dedicated channels may differ significantly from the number of calls on the other channels.

Users are having trouble accessing Meridian Mail Compact Option

Users may have trouble accessing Meridian Mail Compact Option (for example, callers are getting ringback or a busy signal) if the system is busy.

Suggested action

Check if the dedicated channel appears to have much fewer calls than other channels. If so, you may be better off removing the dedication and opening the channel to all services. A busy system cannot afford to have any channels that are not sharing the full load on the system.

Services Detail report

Introduction This report is available only if Voice Menus is installed on your system. The Services Detail report records the number of accesses, direct or indirect, to voice menus, announcements, thru-dial service, and time-of-day controllers. Direct accesses occur when a user dials the VSDN of the service. Indirect accesses occur when a service is accessed from another service through a menu selection.

The screen The following is an example of the Services Detail report screen.

Operational Measurements														
Services Detail														
Interval Start-End														
		Service	For each menu item, the number of accesses are:											
Cust#	ID	Accesses	1	2	3	4	5	6	7	8	9	0	*	#
5/01	18:00-19:00	No Activity												
5/01	19:00-20:00	No Activity												
5/01	20:00-21:00	No Activity												
5/01	21:00-22:00	No Activity												
5/01	22:00-23:00	No Activity												
5/01	23:00-00:00	No Activity												
5/02	00:00-01:00	No Activity												
5/02	01:00-02:00	No Activity												
5/02	02:00-03:00	No Activity												
5/02	03:00-04:00	No Activity												
5/02	04:00-05:00	No Activity												
5/02	05:00-06:00	No Activity												
5/02	06:00-07:00	No Activity												
Select a softkey > _														
Exit			Next Report						Next Page					

Fields in the Services Detail report

Interval Start-End

Data are divided into intervals. The length of the interval depends on the entry made in the Traffic Commit Interval field in the Operational Measurement Options screen. The number of intervals displayed depends on the entries made in the Traffic Period Start and Traffic Period End fields in the Operational Measurement Options screen.

Example

If data are collected 24 hours a day, and the commit interval is one hour, the report will divide the data into 24 intervals for each day included in the report. The amount of data displayed in this report depends on the Report Start and Report End entries that were made in the Traffic Reports screen. If no report start and end dates and times were given, all data currently stored on disk are displayed.

ID

This is the service followed by the ID number. The services are as follows:

Acronym	Service	Acronym	Service
AS	Announcement	TD	Time of Day
MS	Voice Menu	TS	Thru-Dial

Service Accesses

This is the number of times the service was accessed (either directly or indirectly) during the measurement period.

**For each menu item,
the number of
accesses are**

This is the total number of times that each menu option was used during the measurement period. For stand-alone announcements, all frequencies are 0. If announcements are accessed through a voice menu, then there is an access count if a caller presses 0 to revert to the attendant.

Note: The number of accesses for the individual menu items may not add up to the number of accesses for the menu itself (Service Accesses) because some callers will hang up after reaching the menu if they do not want to choose any of the menu options, or if they want to talk to a live person.

Similarly, calls from rotary dial phones that are able to directly access a menu will be counted in the Service Accesses column but not in the number of accesses for individual menu items, since the rotary dial phone does not have the touch-tone capability required to select a menu item.

For Thru-Dial, the number of accesses for key “0” count the number of times callers press zero to revert to the attendant. The “-” (dashes) emphasize no other count keys are being counted. For Time of Day, all menu item accesses are shown as dashes.

Analyzing the Services Detail report

Introduction

This report provides a detailed breakdown of which menu items or announcements are actually being accessed, and a sense of the traffic that each service is generating.

Note: For a proper analysis of this report, have a printed copy of the service in front of you for reference.

While reviewing the report, consider the following.

If the menu requires reorganization

Menu items that are at the end of the menu (for example, item 8 or 9) are being accessed more frequently than earlier items.

Suggested action

You may wish to reorganize the menu so that the popular items are presented first.

This structure prevents users from having to wait through all the earlier options before hearing the one they want, thus reducing the call length.

A service is generating a high volume of traffic

A particular service is generating a high volume of traffic.

Suggested action

Find out if there is any call blockage (that is, users are unable to access the system).

If announcements or menus are causing call blockage, see if the information can be provided in some other way than through Meridian Mail Compact Option (for example, through hard-copy memos or bulletin boards). If the service is a definite requirement and its usage cannot be decreased, then your system may require a channel expansion.

There are menu items with few or no accesses

If a menu item has few or no accesses, the reason may be either that there is a lack of training or awareness regarding those items, or that those items are simply not required.

Suggested action

If you find that certain services are not required, either remove them or replace them with more useful services. Check with the application owners to ensure the correct telephone number has been provided to the target audience. Be sure to rerecord the greetings and menu choices to reflect the changes.

The traffic pattern is unusual

Is the traffic high or low for a particular service?

Suggested action

Consult the users to determine if there was some unusual reason for the change in traffic.

If the high or low traffic is expected to return to acceptable levels, no adjustment may be necessary to the system.

Networking Detail report

Introduction

This report is available only on systems with Meridian Mail Networking installed. The Networking Detail report displays traffic totals for each active site within the network for traffic generated by Enterprise Networking. Statistics are shown for the number of messages received at each site from other network sites and the messages delivered to network sites. Statistics are also displayed for network usage and failures.

The screen

The following is an example of the Networking Detail report screen.

Operational Measurements																		
Networking Detail																		
Interval Start-End		Messages					Messages Delivered			Network Usage		Failures						
		Received					Eco	Std	Urg	NDN	Ack	Failed	Att	Suc	Time	No	Not	Prot
Site (from Site)		(-----to site-----) to Send											(min)		Res	Reach	Error	
5/01 18:00-19:00		No Activity																
5/01 19:00-20:00		No Activity																
5/01 20:00-21:00		No Activity																
5/01 21:00-22:00		No Activity																
5/01 22:00-23:00		No Activity																
5/01 23:00-00:00		No Activity																
5/02 00:00-01:00		No Activity																
5/02 01:00-02:00		No Activity																
5/02 02:00-03:00		No Activity																
5/02 03:00-04:00		No Activity																
5/02 04:00-05:00		No Activity																
5/02 05:00-06:00		No Activity																
Select a softkey > _																		
Exit					Next Report					Next Page								

Fields in the Networking Detail report

Interval Start-End

Data are divided into intervals. The length of the interval depends on the entry made in the Traffic Commit Interval field in the Operational Measurement Options screen. The number of intervals displayed depends on the entries made in the Traffic Period Start and Traffic Period End fields in the Operational Measurement Options screen.

Example

If data is collected 24 hours a day and the commit interval is one hour, the report will divide the data into 24 intervals for each day included in the report. The amount of data displayed in this report depends on the Report Start and Report End entries that were made in the Traffic Reports screen. If no report start and end dates and times were given, all data currently stored on disk are displayed.

Site

This is the remote site ID to which the row of data applies.

Messages Received

This field indicates the number of messages received successfully by the local site from the specified remote site.

Messages Delivered

This is the number of messages delivered from the local site to the identified remote site during the specified interval. This statistic is further subdivided into the following categories based on the type of message.

Eco

These are messages that have been classed as economy.

Std

These are messages that have been classed as standard.

Urg

These are messages that have been classed as urgent.

NDN

These are non-delivery notification messages sent by the system to users whose messages could not be delivered to some of the intended recipients due to incorrect addressing.

Ack

These are acknowledgments sent to the remote site to indicate that a message (that was tagged for acknowledgment) was read by the Meridian Mail Compact Option user at the local site.

Failed to send

This indicates messages for which each delivery attempt failed and the messages could not be delivered to the remote site within the stale time threshold (refer to the *Meridian Mail Compact Option Enterprise Networking Installation and Administration Guide* (NTP 555-7001-222) for information about stale-dating). Failed to Send messages are returned to the user with a Non-Delivery Notification (NDN). The user then may forward the message to the remote user again.

Network Usage

This statistic indicates the number of networking calls placed by the local site to the specified remote site during the specified interval. It is further broken down into the following categories.

Att

This indicates the number of attempted calls. For outgoing sessions, this field is incremented each time a channel is acquired to make a call to this remote site. For incoming sessions, it is incremented when the call is answered, and the network passwords and site IDs are confirmed.

Suc

This indicates the number of successful calls. For Enterprise sessions, it is incremented once for each session in which at least one message is successfully sent or received.

Time (min)

This indicates the total amount of time (in minutes) used by networking calls to and from the specified remote site.

Failures

A failure refers to a single unsuccessful attempt to send a networking message. Networking will attempt to send these messages the next time it is scheduled to send messages to the remote site. If a message experiences many failures and is not delivered within a certain period of time, it will be reported in the Failed to Send field and the message is returned to the sender.

No Res

The No Resources failure means that one of the following occurred

- no channels available
- maximum number of outgoing connections is reached

Not Reach

This field is incremented each time a network connection is dropped or a problem is encountered while sending or receiving message information.

Prot Error

This field is incremented if a protocol violation is detected.

Analyzing the Networking Detail report

Introduction

This report provides a detailed breakdown of the networking usage on the system. While viewing the reports, consider the following information.

Note: For a proper analysis of this report, have a diagram of the network in front of you to refer to.

The “Failed to Send” messages is high

If the number of “Failed to Send” messages is high, there may be a problem with your networking setup.

Suggested action

Check to make sure that the remote site is not down. If the remote site is up and running, check the networking schedule parameters to see if they are correct. For details on changing networking parameters, refer to the following document:

- *Meridian Mail Compact Option Enterprise Networking Installation and Administration Guide*
(NTP 555-7001-222)

The number of NDNs delivered is high

If the number of NDNs delivered is high, this indicates that messages couldn’t be delivered to local users. This may be due to one of the following:

the local users don’t exist, the address in the message is incorrect, or the user cannot receive composed messages (Class of Service field)

- the local systems disk is full
- the network setup is incorrect
 - site numbers and location IDs are defined differently from remote sites
 - mailbox number/dial plan is configured incorrectly

Suggested action

Check that the disk is not full. If that is not the problem, confirm that the network setup is the same as the remote site's network database. If this isn't the problem, confirm the existence of the remote site which the mailboxes cannot be delivered to and confirm that the site can receive composed messages.

The ratio of urgent networking messages to others sent is high

If the number of urgent networking messages sent is high compared to the number of standard messages, the system may not have enough channels to support the actual traffic.

Suggested action

If this is a problem, you may want to change the networking configuration. For details on changing networking parameters, refer to one of the following documents:

- *Meridian Mail Compact Option Enterprise Networking Installation and Administration Guide* (NTP 555-7001-222)

Disk Usage Detail report

- Introduction

The Disk Usage Detail report provides information on disk space usage on the voice storage volumes.
- The screen

The following is an example of the Disk Usage Detail report screen.

Operational Measurements					
Disk Usage Detail					
Interval	Start-End	Volume Name	Voice Volume Size (hh:mm)	Voice Space Used (%)	Text Space Used (%)
5/01	18:00-19:00	VS1	2:05	4	54
5/01	19:00-20:00	VS1	2:05	4	54
Select a softkey > _					
Exit		Next Report		Trace	

Fields in the Disk Usage Detail report

Interval Start-End Data are divided into intervals. The length of the interval depends on the entry made in the Traffic Commit Interval field in the Operational Measurement Options screen. The number of intervals displayed depends on the entries made in the Traffic Period Start and Traffic Period End fields in the Operational Measurement Options screen.

Example

If data are collected 24 hours a day (from 01:00 to 01:00), and the commit interval is one hour, the report will divide the data into 24 intervals for each day included in the report. The amount of data displayed in this report depends on the Report Start and Report End entries that were made in the Traffic Reports screen. If no report start and end dates and times were given, all data currently stored on disk are displayed.

Volume Name This shows the name of the user volume, VS1, on Meridian Mail Compact Option systems. A volume is a section on Meridian Mail Compact Option disk.

Voice Volume Size (hh:mm) This shows the amount of disk space that has been used, displayed in hours and minutes. One hour of voice storage is equivalent to 8.5 Mbytes.

Voice Space Used (%) This indicates the percentage of the volume's voice capacity used at the end of the interval.

Text Space Used (%) This indicates the percentage of the volume's text capacity used at the end of the interval.

Analyzing the Disk Usage Detail report

Voice space

The voice space used will fluctuate, especially if your system has an automatic read-message deletion feature enabled. However, if the Voice Space Used percentage is consistently over your disk usage warning level, then steps should be taken to reduce the amount of voice space used.

ATTENTION

If the system generates a SEER 1103, print this Disk Usage Detail report immediately. This SEER indicates that your system has reached physical or virtual capacity. Check that the nightly audit is functioning. Remove files on the volume in question. If the operation involved VS1, remove directory entries or OM files. The effect of corrective actions may be delayed until the nightly audit is run. Consider redistributing users on multiple nodes, turning on automatic message deletion, or buying a storage upgrade.

Reducing voice space You can reduce the voice space used by deleting unnecessary mailboxes and ensuring that distribution lists are up to date. If these unnecessary or unused mailboxes are on distribution lists, they may be storing messages sent using outdated distribution lists. With no one logging on to delete the messages, the messages continue to accumulate and use up more disk space. You can also encourage users to delete their messages more frequently, or even reduce the allowable maximum message length ([see Chapter 25, "Class of Service administration"](#)).

Reviewing voice menus and announcements

To lower voice space used, you can also review all voice menus and voice announcements to see if their size can be reduced. For example, unused menu items can be removed. You can also consult the User Usage reports to identify users with excessive storage. This might happen if a user stops accessing his or her mailbox (for example, if the user is on vacation), but callers continue to leave messages.

The text space has changed dramatically

Text space used should not fluctuate greatly from day to day, although it will vary over time. Any large fluctuations or significant steady increases in the text space used should be reported to your technical support organization.

Chapter 31

User Usage reports

In this chapter

<u>Overview</u>	<u>31-2</u>
<u>The User Usage Reports screen</u>	<u>31-3</u>
<u>Fields in the User Usage Reports screen</u>	<u>31-4</u>
<u>Generating User Usage reports</u>	<u>31-7</u>
<u>User Usage report</u>	<u>31-9</u>
<u>Fields in the User Usage report</u>	<u>31-11</u>
<u>Analyzing User Usage reports</u>	<u>31-14</u>

Overview

Introduction

The User Usage report provides statistics for local voice messaging usage on a per-user basis. If Meridian Mail Networking is installed, then the report also displays users' daily networking activity. To generate User Usage reports, use the User Usage Reports screen.

Note: Check the Operational Measurement Options screen to make sure that the collection of user usage data is enabled. If it is disabled, enable it.

The User Usage Reports screen

Introduction

User Usage reports search criteria are specified in the User Usage Reports screen.

The screen

The following is an example of the User Usage Reports screen.

The screenshot displays the 'User Usage Reports' screen. At the top, the title 'User Usage Reports' is centered. Below it, the 'Selection Criteria:' section shows 'All' selected for 'Lastname Mailbox Department'. The 'Sorted:' section shows 'Alphabetical' selected for 'By_Department'. The 'Include Local Usage:' section has 'No' selected for 'Yes'. The 'Include Meridian Mail Network Usage:' section has 'No' selected for 'Yes'. Below these sections, there are two lines for 'Report Start (mm/dd/yy):' and 'Report End (mm/dd/yy):', both followed by '(or blank for oldest/newest)'. At the bottom, a 'Select a softkey >' prompt is followed by five buttons: 'Exit', a blank button, 'View Reports', 'Print Reports', and another blank button.

```
User Usage Reports
User Usage Reports
Selection Criteria:      All Lastname Mailbox Department
Sorted:                 Alphabetical By_Department
Include Local Usage:    No Yes
Include Meridian Mail Network Usage: No Yes

Report Start (mm/dd/yy): _____ (or blank for oldest)
Report End  (mm/dd/yy): _____ (or blank for newest)

Select a softkey >
Exit      View Reports Print Reports
```

Fields in the User Usage Reports screen

Introduction The following fields appear on the User Usage Reports screen. Select parameters and choose options required to create the type of report you need.

Selection Criteria The following options are search parameters. Statistics matching your selection are displayed in the report.

All

When this option is selected, user usage data for all local users will be displayed in the report.

Lastname

When this option is selected, you are prompted for the last name of the subscriber whose data you want to view. If the last name is not found, use the Find Users feature in User Administration to verify that the name exists in the system. You may use wildcard characters (“+”, “?”, or “_”) to retrieve a group of users.

Mailbox

When this option is selected, you are prompted for the mailbox number of the user whose data you want to view. You may use wildcard characters (“+”, “?”, or “_”) to retrieve a range of mailboxes. If the mailbox number is not found, use the Find Users feature in User Administration to verify that the mailbox number exists in the system.

Department

When this option is selected, you are prompted for a department name. All users associated with that department will be displayed in the report. The entry you make must correspond to an existing entry in the system. Use wildcard characters (“+”, “?”, or “_”) to retrieve a group of departments.

Note: When searching by department, users with blank department fields will not be displayed.

Sorted

If your selection criterion is All Users, you can choose to sort the user data alphabetically, according to user names, or according to department names.

Note: When sorting by department, users with blank department fields will not be displayed.

Include Local Usage

This field is displayed if Meridian Mail Networking is enabled. (If networking is not installed, the report displays only local usage.) Set the field to Yes to include user usage data for local voice messaging. This includes information about the number of Express Messaging and logon sessions the user had during the specified interval, the number of messages that were created during the Express Messaging and logon sessions and the total length of those messages, the amount of time that the user was connected to Meridian Mail, and the amount of disk space used by those messages. The default is Yes.

Include Meridian Network Usage

This field is displayed if Meridian Mail Networking is enabled. When this field is set to Yes, the report will include user usage data for all networking activity. This information includes the number of economy, standard, and urgent messages that users created during the specified interval as well as the total length of the messages created (for each of the three types of messages). The default is No.

**Report Start
(mm/dd/yy)**

This is the date on which the selected reports are to start. If Report Start predates the earliest available date, the report starts with the earliest available date. Leave this field blank to retrieve reports for the earliest available data. (The format mm/dd/yy hh:mm is the default. The format can be changed in General Administration, General Options. For more information, see Chapter 13, "General options".

**Report End
(mm/dd/yy)**

This is the date on which the selected reports are to end. If Report End exceeds the latest available period, the report ends with the last available period. Leave this field blank to report on the most recent data. (The format mm/dd/yy hh:mm is the default. The format can be changed in General Administration, General Options. For more information, see Chapter 13, "General options".

Generating User Usage reports

Introduction

The following information describes the procedure to generate User Usage reports.

Procedure

To generate User Usage reports, follow these steps.

Starting Point: Main Menu

Step Action

- 1 Select Operational Measurements.
Result: The Operational Measurements screen is displayed.
- 2 Select User Usage Reports from the Operational Measurements menu.
Result: The User Usage Reports screen is displayed.
- 3 Choose the selection criteria by which you want to retrieve data.
- 4 If the selection criterion is All, select how you want the data to be sorted: alphabetically (by user name) or by department name.
- 5 Select the type of data you want to view: local usage, Meridian Mail Networking or both. You can select both if required.
Note: Usage is available only if Meridian Mail Networking is installed.
- 6 If you wish to specify a start and stop time for the reporting period, enter the required values in the Report Start and Report End fields.
- 7 Choose one of the following options.

TO	GO to step
view User Usage reports	8.
print User Usage reports	9.
exit User Usage reports	10.

Step	Action
------	--------

8	Press [View Reports].
---	-----------------------

Result: The selected report screens are displayed (see the following pages for descriptions of each report).

Press [Next Page] to view subsequent pages of the report; press [Exit] to return to the User Usage Reports screen.

9	Press [Print Reports].
---	------------------------

Result: You are prompted to make sure that your printer is ready and online.

Press [Continue Printing] to print the reports, or press [Cancel Printing] at any time to cancel printing. There may be some delay before control is returned to the screen because it waits for the printer to stop printing.

10	Press [Exit].
----	---------------

The Operational Measurements menu is redisplayed.

User Usage report

Introduction

When you view the report on the terminal or from a printout, the data is arranged as shown in the diagram below. These examples show all types of user usage data (local and Meridian Mail Networking).

The screen

The following is an example of the User Usage report.

EVEN CORP.				User Usage Reports						
Last Name		First Name		Department		MailBox		COS		
potts		brian		customer servi		8050		0		
Local Usage:										
Number of Sessions		Connect Time		Number of Messages		Message Length		Disk Used		
Date	EM/Ans Logon		(mm:ss)		EM/Ans Logon		(mm:ss)		(mm:ss)	
6/10/96	3	8	5:03		3	4	0:16		0:00	

Total	3	8	5:03		3	4	0:16			

Last Name		First Name		Department		MailBox		COS		
xxx						7000		0		
Local Usage:										
Number of		Connect		Number of		Message		Disk		

Select a softkey > _										
Exit						Next Page				

User Usage Reports						
Last Name	First Name	Department	MailBox	COS		
Artaud	Andy	Software Engin	7551	0		
Local Usage:						
	Number of	Connect	Number of	Message	Disk	
	Sessions	Time	Messages	Length	Used	
Date	EM/Ans Logon	(mm:ss)	EM/Ans Logon	(mm:ss)	(mm:ss)	
No User Activity						
Meridian Mail Network Usage:						
	Number of	Total	Number of	Total	Number of	Total
	Economy	Length	Standard	Length	Urgent	Length
Date	Messages	(mm:ss)	Messages	(mm:ss)	Messages	(mm:ss)
No User Activity						

Last Name	First Name	Department	MailBox	COS		
Select a softkey >						
Exit				Next Page		

Fields in the User Usage report

Introduction

These are the fields that are displayed in the User Usage report.

Header fields

Last Name

This is the user's last name.

First Name

This is the user's first name.

Department

This is the user's department name.

Mailbox

This is the user's mailbox number.

COS

This is the class of service number assigned to the user.

Local Usage fields

Date

This is the date of the reporting interval.

Number of Sessions

This is the number of Express Messaging, Call Answering, and logon sessions that occurred during the interval. To check the number of messages that were actually received or created during these sessions, check the Number of Messages field.

- **EM/Ans** refers to the total number of sessions created by Express Messaging or Call Answering calls to this mailbox. The number of abandoned calls (where no message is left) can be calculated by subtracting the number of EM/Ans messages from the number of EM/Ans sessions.

- **Logon** refers to the number of times the user logged into the mailbox for any reason.

Connect Time (mm:ss)

This is the length of time (in minutes and seconds) that the user was connected to the Voice Messaging service on the given date.

Number of Messages

This is the number of messages that the user received and created on the given date.

- **EM/Ans** refers to the number of messages left in the user's mailbox by both the Express Messaging and Call Answering services. The number of abandoned calls (where no message is left) can be calculated by subtracting the number of EM/Ans messages from the number of EM/Ans sessions.
- **Logon** refers to the number of messages that the user created on the report date.

Message Length (mm:ss)

This is the total time (in minutes and seconds) of all call answering messages received and messages created by the user or deposited in the user's mailbox on the given date.

Disk Used (mm:ss)

This is the amount of storage used by the user (measured in minutes and seconds) on the given date. This includes storage for greetings and personal verifications (spoken name recordings).

**Meridian Mail
Networking usage
fields**

Date

This is the date of the reporting interval.

Number of Economy Messages

This is the number of economy messages that the user created on the given date.

Total Length (mm:ss)

This is the total length (in minutes and seconds) of all networking messages created by the user on the given date and tagged as economy.

Number of Standard Messages

This is the number of standard messages that the user created on the given date.

Total Length (mm:ss)

This is the total length (in minutes and seconds) of all networking messages created by the user on the given date and tagged as standard.

Number of Urgent Messages

This is the number of urgent messages that the user created on the given date.

Total Length (mm:ss)

This is the total length (in minutes and seconds) of all networking messages created by the user on the given date and tagged as urgent.

Analyzing User Usage reports

The EM/Ans numbers are high and the logon count is low

The user may be accumulating too many messages before checking the mailbox and thereby contributing to a low disk space problem.

Suggested action

If disk space is already low (check the Disk Usage Detail report), you may need to make the user more aware of the importance of not accumulating messages.

Monitor the length of messages closely. If messages are too long for some users, you may wish to shorten their storage limit to encourage the users to empty their mailboxes more frequently. (For more information, see Chapter 7, "User administration—an overview".) You can also alter the maximum message length parameter (see Chapter 25, "Class of Service administration") to deter callers from leaving long messages.

You can assign a class of service (COS) with a shorter storage limit to encourage the users to empty their mailboxes more frequently (see Chapter 7, "User administration—an overview"). You can also alter the maximum message length parameter (see Chapter 25, "Class of Service administration") to deter callers from leaving long messages.

The number of logons is zero

Suggested action

Check the Time of Last Logon field in the View/Modify Local Voice User screen. If a considerable amount of time has passed since the last successful logon, you may want to contact the user to see if he or she is having any problems logging on. For example, the user may not know how to log on and retrieve messages (especially if this is a new user), or the user may have forgotten the mailbox password and has stopped trying to log on.

Chapter 32

Bulk provisioning

In this chapter

<u>Overview</u>	<u>32-2</u>
<u>Section A: Introduction to bulk provisioning</u>	<u>32-3</u>
<u>Section B: Working with bulk provisioning data sets</u>	<u>32-9</u>
<u>Section C: Transferring bulk provisioning data onto tape</u>	<u>32-29</u>
<u>Section D: Provisioning data into a Meridian Mail Compact Option system</u>	<u>32-37</u>

Overview

Introduction

This chapter contains information on the bulk provisioning feature of Meridian Mail Compact Option. Bulk provisioning allows administrators or distributors to copy voice services such as menus and announcements from one Meridian Mail Compact Option system to another.

[Section A](#) provides a conceptual overview of bulk provisioning and its uses.

[Section B](#) discusses bulk provisioning data sets, including the procedure to create them. As well, procedures for deleting, viewing, and printing data sets are included.

[Section C](#) describes the procedure for copying the bulk provisioning data sets onto tape.

[Section D](#) provides information about provisioning bulk provisioning data sets to the Meridian Mail Compact Option system.

Section A **Introduction to bulk provisioning**

In this section

<u>Overview</u>	<u>32-4</u>
<u>What is bulk provisioning?</u>	<u>32-5</u>
<u>Using bulk provisioning</u>	<u>32-6</u>

Overview

Introduction

This section includes information on the concept of bulk provisioning—what it is and how it can be used. Included are examples and operational considerations.

What is bulk provisioning?

Introduction This topic describes and gives examples of bulk provisioning.

Description Bulk provisioning is a feature that allows the administrator to collect voice service, VSDN, and local user information into data sets, copy them to tape, and have the information copied to other Meridian Mail Compact Option systems.

Bulk provisioning enables selective distribution of one system's VSDNs and services on another system.

Example The XYZ Company head office has decided to open a new location in the western region. The new site is obtaining its own Meridian Mail Compact Option system. The company's president wants his customers in the western region to receive the same greetings and services provided at head office.

In order to provide the same services (for example, menus and announcements) to the new site as they have at head office, the administrator uses bulk provisioning to collect the required services onto tape. The administrator then sends the tape to the western region site. At the new site, the administrator provisions the new system with the information on the tape.

If both sites have Enterprise Networking installed, the administrator can use bulk provisioning to collect local user information, copy it onto a tape and send it to the western region site where it is added as remote users. This allows the remote users to have their names played in their own voices, during message compose and when name and dial addressed. This feature helps make the network appear transparent.

Using bulk provisioning

Introduction	This topic describes uses of the bulk provisioning feature.
System setup	Bulk provisioning can be used to initialize a new Meridian Mail Compact Option system. Selected or all services as well as VSDNs can be collected from the “master” Meridian Mail Compact Option system into data sets, copied to tape, and provisioned to new Meridian Mail Compact Option systems. This allows the administrator to ensure that all services, including menus, announcements, time of day controllers, and all other services defined using Voice Services Administration (VSA) are distributed and installed on all Meridian Mail Compact Option systems. Once the system is set up, the administrator can also save periodic updates to tape and provision them at other Meridian Mail Compact Option systems. In this way, a group of Meridian Mail Compact Option systems can always be kept up-to-date with the same services and VSDNs.
Remote user administration	Bulk provisioning allows the administrator to add remote user information to systems with Enterprise Networking all at once rather than one user at a time. The users’ spoken names in their own voices are included so that the administrator is no longer required to record them. The users’ organization directory entries are copied to tape; the administrator uses this tape to provision the users on another Meridian Mail Compact Option system in the network. If the networking feature is installed, local users may be copied to tape.

Initial setup of temporary remote voice users

Bulk provisioning of the local users information allows the administrator to provide initial setup of temporary remote users on a new system. A sender's name and mailbox information can be propagated across the network along with their messages via Enterprise Networking.

Note: Temporary remote users are subject to a nightly audit. This audit removes the less recently accessed remote users in order to lessen the load on the system. See the chapter "Remote Voice Users." Permanent remote users remain on the system until deleted by the administrator.

Addition of remote user attributes: a comparison

The following table compares the addition of remote user attributes by network propagation and bulk provisioning.

Remote User Attribute	Remote user information added by network propagation	Remote user information added by bulk provisioning
Last name, first name	first 18 characters	entire name
Mailbox	yes	yes
Primary DN	= mailbox (if the DN=mailbox convention is set up in the network database)	= mailbox (if the DN=mailbox convention is set up in the network database)
Spoken name	yes, updated with each message sent	yes
Dialable by external callers	yes, default set by administrator	yes, default set by administrator
Department	no	yes
Temporary user flag	temporary	temporary or permanent, as selected by administrator

Bundled applications

A service bureau can create "applications" which, if bundled, could be sold as value-added packages to your mail system.

For instance, a recorded front-end menu could be provided on all your systems.

Section B **Working with bulk provisioning data sets**

In this section

<u>Overview</u>	<u>32-10</u>
<u>Assembling bulk provisioning data sets</u>	<u>32-11</u>
<u>Creating and modifying bulk provisioning data sets</u>	<u>32-14</u>
<u>Viewing and printing bulk provisioning data sets</u>	<u>32-23</u>
<u>Deleting bulk provisioning data sets</u>	<u>32-27</u>

Overview

Introduction

This section includes information that you need to create and modify bulk provisioning data sets. Also included are instructions on viewing, printing, and deleting data sets.

Assembling bulk provisioning data sets

Introduction

This section provides information required to create new bulk provisioning data sets and modify data sets that currently exist.

Concept of bulk provisioning data sets

Bulk provisioning provides the administrator with the ability to group sets of provisioning data into a catalog. The administrator can select services, VSDNs, and local user information for provisioning to other systems. These selections are saved in a bulk provisioning data set and later copied to tape.

These data sets are the starting point for bulk provisioning. At this point, the tape is created from a data set and is sent to another site where the contents can be duplicated on the target Meridian Mail Compact Option system.

The administrator can create up to 100 bulk provisioning data sets. The data sets can be stored for future use, and can be modified if required.

Using Wildcards in the Provisioning Data

Using wildcards can be useful when specifying or VSDNs. By using wildcards, the administrator can collect much more information than the number of input fields would allow. Also, wildcards provide a means to help organize the items in the data set.

The wildcards available for use are the organization directory wildcards:

- “+” to represent any number of characters
- “_” to represent exactly one character

Example

The administrator in an automotive company can group one set of voice services (menus, announcements) referring to new

products with service IDs beginning with the characters 11 (for example, 110001, 110002, 110003, 110004 and so on). By using a wildcard character, these services can be referred to as 11+. Another set of services relating to parts and support could be referred to as 12+. This allows the administrator to choose specific groupings of services for various sites.

Important considerations

The administrator must be aware of the following important considerations before beginning to collect data for the provisioning data sets.

Support requirements

The administrator must ensure that the target system is correctly set up with support needed for the services and VSDNs that are being bulk provisioned. Included in these considerations are features, hours, networking sites, DNs or TNs, switch connectivity, and system restriction/permission lists.

Dependencies

The administrator must ensure that services provisioned to a target system do not have references to services that do not exist on the system. For instance, menus or time-of-day controllers typically refer to other services that should be included in the data set as well. VSDNs may also require certain services in order to function properly. Bulk provisioning does not automatically resolve these dependencies. This is the administrator's responsibility.

Hardware-specific information

Hardware-specific information is not propagated to the target system. This information includes

- port names
- link information
- network database information relating to local and remote sites

- the hardware database

Restriction/permission indexes

Restriction and permission indexes associated with specific services on the source system are brought over to the target system. The administrator must take care to ensure that the indexes make sense when pre-configuring systems across area codes on the destination system.

Important considerations, cont'd**Dialing plan comparison**

The system does not do a comparison check of the DN's of the source system against the dialing plan of the target system. This affects

- VSDNs (such as menus, announcements, and time-of-day controllers)
- billing DN's
- revert DN's
- attendant DN's

Remapping capability

No capability is provided for remapping of DN's or various service IDs. The target system will have exactly the same DN's and service IDs as the source system.

The administrator should make sure that all revert DN's and service IDs make sense on the target system before beginning the bulk provisioning. If required, the administrator of the target system can use the MMI to correct DN's and service IDs of provisioned services.

System profiles

Information kept in the system profiles is not transferred during bulk provisioning.

Creating and modifying bulk provisioning data sets

Introduction This section provides information required to create and modify data sets for bulk provisioning.

The Add Data Set screen The following is an example of the Add Data Set screen.

Bulk Provisioning

Add Data Set

Data Set Name: Service01

Local Users: None All Individual Volume COS Dept
Enter individual user mailboxes. Wildcards + and _ permitted.
756+

Services: None All Individual

VSDNs: None All Individual

Select a softkey >

Save

Cancel

View Detail

Print Detail

The View/Modify Data Set screen The following is an example of the View/Modify Data Set screen.

Bulk Provisioning	
View/Modify Data Set	
Data Set Name:	Service01
Local Users:	None All Individual Volume COS Dept Enter individual user mailboxes. Wildcards + and _ permitted. 756+ _____ _____ _____ _____
Services:	None All Individual
VSDNs:	None All Individual
Please ensure that the printer is ready._	
Cancel Printing	Continue Printing

Field descriptions

The following table describes the fields in the Add Data Set and the View/Modify Data Set screens.

Data Set Name	
Description	A descriptive name for the data set. This name is entered by the administrator.
Limitations	Maximum of 30 characters.
Default	For the Add Data Set screen, the default is blank. (The data set name must be entered or the data set cannot be saved.) For the View/Modify Data Set screen, the data set name is displayed.
Local Users	
Description	The Local Users field displays only on systems that have Enterprise Networking installed. Use this field to add users to the data set. Note: Only local users belonging to the networking customer group may be copied to tape.
Description	The Local Users field displays only on systems that have Enterprise Networking installed. Use this field to add users to the data set.
Options	None, All, Individual, Volume, COS, Dept.

Limitations	Individual: ten users (use of the wildcards “+” and “_” is allowed to expand the number of local users added). Volume: to maximum number of volumes on the system. COS: 15 classes of service. Dept.: five departments (use of the wildcards “+” and “_” is allowed to expand the number of departments added).
Default	None.
Services	
Description	These are the multimedia services.
Options	None, All, Individual.
Limitations	30 services (use of the wildcards “+” and “_” is allowed to expand the number of services added).
Default	None.
VSDNs	
Description	These are the voice service DN's included in the data set.
Options	None, All, Individual.
Limitations	20 VSDNs (use of the wildcards “+” and “_” is allowed to expand the number of VSDNs added).
Default	None.

Creating bulk provisioning data sets

To create bulk provisioning data sets, follow these steps.

Starting Point: The Main Menu screen

Step Action

- 1 Select Bulk Provisioning from the Main Menu screen.

Result: The Bulk Provisioning Menu is displayed.

The screenshot shows a terminal-style interface for the 'Bulk Provisioning' menu. At the top, the title 'Bulk Provisioning' is centered. Below it, a list of three options is displayed: '1 Data Set Maintenance', '2 Copy Data to Tape', and '3 Provision From Tape'. At the bottom of the screen, there is a prompt 'Select an item > =' followed by five rectangular buttons. The first button is labeled 'Exit', and the other four buttons are unlabeled.

Step Action

- 2 Select Data Set Maintenance.

Result: The Data Set Maintenance Menu is displayed.

Bulk Provisioning		
Data Set Maintenance		
Data Set Name	Creation Date	Modified Date
Service01	6/11/96 14:00	6/11/96 14:00
Select a softkey >		
Exit	Add	View/Modify
Delete	Print List	

- 3 Press the [Add] softkey while in the Data Set Maintenance screen.
- Result:** The Add Data Set screen displays.
- 4 Enter a descriptive data set name in the Data Set Name field. This field allows a maximum of 30 characters.
- 5 Use this table to determine your next action.

IF networking**THEN go to**

is installed on your system and
you want to add users

[step 6.](#)

is not installed on your system

[step 8.](#)

Step Action

- 6 Choose one of the following options.

IF you want to add	THEN select
no users	None
all users	All
individual users	Individual
users by volume they reside on	Volume
users by COS (Class of Service)	COS
users by department	Dept.

Result: For options Individual, Volume, COS, and Dept., the display is expanded to provide a number of input fields.

- 7 Complete the input fields as required. See ["Field descriptions" on page 32-16](#) for information on the Local Users fields.
- 8 To add services and/or VSDNs to the bulk provisioning data set, move the cursor to the Services or VSDNs fields.

IF you want to add	THEN select
no services or VSDNs	None in the appropriate field
all services or VSDNs users	All
individual services or VSDNs	Individual

Result: For the Individual option, the display is expanded to provide a number of input fields.

- 9 Complete the input fields for Services and/or VSDNs as required. See ["Field descriptions" on page 32-16](#) for information on the Local Users fields.
- 10 Save the data set by pressing the [Save] softkey. (Before saving the data set, you can view the details by pressing the [View Detail] softkey to make sure that you have chosen the information you require. see ["Viewing details of bulk provisioning data sets" on page 32-23.](#))

Result: The data set is saved. You are returned to the Data Set Maintenance screen.

Modifying bulk provisioning data sets

To modify bulk provisioning data sets, follow these steps.

Note: Use the up and down arrows (↑↓) to move between fields and the left and right arrows (← →) to move between options within a field.

Starting Point: The Main Menu

Step Action

- 1 Select Bulk Provisioning from the Main Menu screen.
- 2 Select Data Set Maintenance.

Result: The Data Set Maintenance Menu is displayed.

Bulk Provisioning		
Data Set Maintenance		
Data Set Name	Creation Date	Modified Date
Service01	6/11/96 14:00	6/11/96 14:00

Select a softkey >

Exit	Add	View/Modify	Delete	Print List
------	-----	-------------	--------	------------

- 3 Move the highlight bar to the data set that you want to modify.
Result: The data set name is highlighted.
- 4 Press the [View/Modify] softkey.
Result: The View/Modify Data Set screen is displayed.
- 5 Change the input fields as required. See [“Field descriptions” on page 32-16](#) for information on each of the fields.

Step	Action
------	--------

- | | |
|---|--|
| 6 | Save the data set by pressing the [Save] softkey. (Before saving the data set, you can view the details by pressing the [View Detail] softkey to make sure that you have chosen the information you require. see "Viewing details of bulk provisioning data sets" on page 32-23.) |
|---|--|

Result: The data set is saved. You are returned to the Data Set Maintenance screen.

Viewing and printing bulk provisioning data sets

Introduction

This section contains the information required to view and print the contents of bulk provisioning data sets.

View/Modify Data Set screen

The following is an example of the View/Modify Data Set screen.

Bulk Provisioning

View/Modify Data Set

Data Set Name: Service01

Local Users: None All **Individual** Volume COS Dept
 Enter individual user mailboxes. Wildcards + and _ permitted.
756+

Services: None **All** Individual

VSDNs: None **All** Individual

Please ensure that the printer is ready._

Cancel Printing **Continue Printing**

Field descriptions

The fields in the View/Modify Data Set screen are the same as those in the Add Data Set screen. Please see [page 32-16](#) for detailed field descriptions.

Viewing details of bulk provisioning data sets

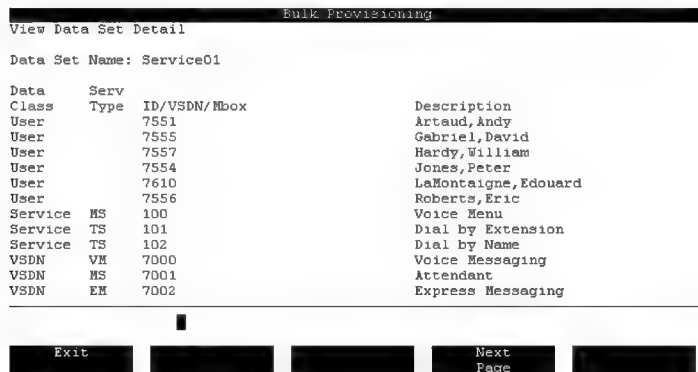
To view details of bulk provisioning data sets, use the following steps. This procedure can be used when modifying existing data sets as well as when adding new data sets.

Starting Point: The Add Data Set or the View/Modify Data Set screen.

Step Action

- 1 Press the [View Detail] softkey.

Result: The View Data Set Detail screen is displayed.



- 2 Press the [Next Page] softkey (if available) to view additional screens.
- 3 Press the [Exit] softkey to exit from the View Data Set Detail screen.

Result: You are returned to the Add Data Set or View/Modify Data Set screen.

Printing bulk provisioning data

To print the detail of bulk provisioning data sets, use the following steps. This procedure can be used when modifying existing data sets as well as when adding new data sets.

Starting Point: The Add Data Set or the View/Modify Data Set screen.

Step Action

- 1 Press the [Print Detail] softkey.

Result: The prompt “Please ensure that the printer is ready” is displayed.

Bulk Provisioning

View/Modify Data Set

Data Set Name: Service01

Local Users: None All **Individual** Volume COS Dept
Enter individual user mailboxes. Wildcards + and _ permitted.
756+ _____

Services: None **All** Individual

VSDNs: None **All** Individual

Please ensure that the printer is ready._

Cancel Printing Continue Printing

- 2 Use this table to determine your next action.

IF the printer is

THEN

ready

press the [Continue Printing] softkey to print the contents of the data set.

not ready

ready the printer and return to **step 1**.

To cancel the printing, press the [Cancel Printing] softkey at any time.

Result: When printing is complete, you are returned to the Add Data Set screen or the View/Modify Data Set.

Printing a list of bulk provisioning data sets

To print a list of bulk provisioning data sets, use the following steps.

Starting Point: The Bulk Provisioning menu.

Step Action

- 1

Select Data Set Maintenance.
Result: The Data Set Maintenance screen displays.
- 2

Press the [Print List] softkey.
Result: The prompt “Please ensure that the printer is ready” is displayed.
- 3

Use this table to determine your next action.

IF the printer is	THEN
ready	press the [Continue Printing] softkey to print the list of data sets.
not ready	ready the printer and return to step 2 .

Result: The list of data sets is printed.
To cancel the printing, press the [Cancel Printing] softkey at any time.

Step Action

- 2 Use the up and down arrows (↑↓) to move the cursor to the data set you want to delete then press the [Delete] softkey.

Result: The Delete Data Set screen is displayed with a read-only version of the selected data set shown.

The screenshot shows a terminal-style interface for deleting a data set. At the top, a black bar contains the text 'Bulk Provisioning' in white. Below this, the title 'Delete Data Set' is displayed. The main content area shows the following information: 'Data Set Name: Service01_', 'Local Users: None All Individual Volume COS Dept. Enter individual user mailboxes. Wildcards + and _ permitted. 756+', 'Services: None All Individual', and 'VSDNs: None All Individual'. Below this information is a prompt 'Select a softkey >'. At the bottom, there are five rectangular buttons. The first button is labeled 'OK to Delete', the second is labeled 'Cancel', and the other three are unlabeled.

```
Bulk Provisioning
Delete Data Set
Data Set Name:  Service01_
Local Users:    None All Individual Volume COS Dept.
                Enter individual user mailboxes. Wildcards + and _ permitted.
                756+
Services:       None All Individual
VSDNs:         None All Individual

Select a softkey >
OK to Delete   Cancel
```

- 3 Press the [OK to Delete] softkey to delete the data set. (To abort this procedure, press the [Cancel softkey].)

Result: The data set is deleted.

Section C **Transferring bulk provisioning data onto tape**

In this section

Overview	32-30
Copying provisioning data sets onto tape	32-31

Overview

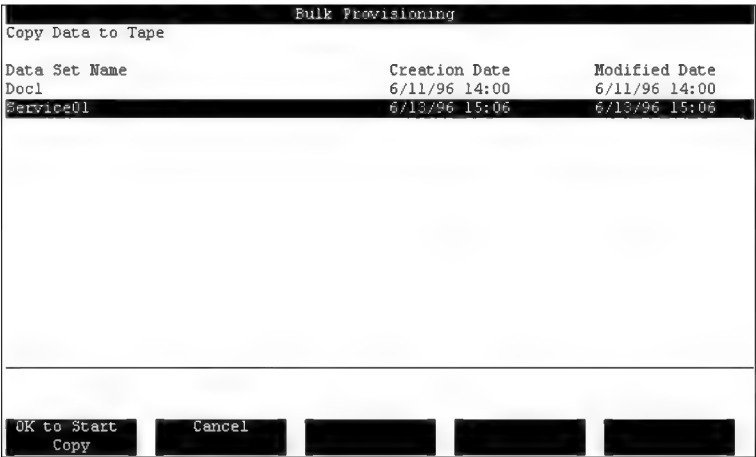
Introduction

This section provides the procedure for copying bulk provisioning data sets onto tape. Also included is a diagram of the Copy Data to Tape screen and a description of the fields in the screen.

Copying provisioning data sets onto tape

Introduction This topic explains how to copy provisioning data sets onto tape. Before you begin the procedure, make sure that you have a tape available and that you are able to load the tape when necessary. You must be logged in as system administrator to perform this procedure.

The Copy Data to Tape screen This is an example of the initial Copy Data to Tape screen.



This is an example of the Copy Data to Tape screen while the copy is in progress.

Bulk Provisioning

OK/Cancel

Copy Data to Tape

Data Set Name	Creation Date	Modified Date
Service01	6/13/96 15:06	6/13/96 15:06

Status: -

Abort

Field descriptions

The following fields are contained in the Copy Data to Tape screen.

Data Set Name

Description	The descriptive name of the data set created by the administrator.
Format	Data set names can be a maximum of 30 characters in length.

Creation Date

Description	The original creation date and time (24 hour clock) of the data set.
Format	date hh:mm (where date is the system date format as selected under General Administration/General options)

Modified Date

Description	The date and time (24 hour clock) that the data set was last modified.
Format	date hh:mm (where date is the system date format as selected under General Administration/General options)

Status

Description	This field shows the status of the copy to tape. This field is viewable only after the tape has been retensioned and the copy to tape begins.
Format	Copy in progress, nn% done or Copy completed successfully Note: The percentage done is based on the number of items to be copied.

Before you begin

Ensure that the tape can be read by the destination system. Older systems have Archive tape drives which can only read DC150 and DC250 tapes.

Procedure

To copy provisioning data onto tape, use the following steps.

Starting Point: The Main Menu.

Step Action

- 1 Select Bulk Provisioning from the Main Menu and press <Return>.
Result: The Bulk Provisioning Menu is displayed.
- 2 Select Copy Data to Tape and press <Return>.
Result: The Copy Data to Tape screen is displayed.
- 3 Using the up and down arrow keys (↑↓), move the highlight bar to the data set you want to copy to tape.
Result: The data set is highlighted.
Note: Since one data set can be selected, only one data set can be copied at a time.
- 4 Load a tape into the tape drive. Make sure that the tape is not write protected.
- 5 Press the [OK to Start Copy] softkey to begin the copy to tape.

IF the tape is**THEN**

in the tape drive in ready status

the copy to tape process begins.

not ready or write protected

the message "Tape drive not ready" or "tape write protected" is displayed.
Return to [step 4](#).

Result: The message "The tape is retensioning" is displayed. Retensioning takes approximately four minutes. After the tape has retensioned, the data are copied to the tape. The Status field displays the status of the copy to tape during the process. Press the [Abort] softkey to cancel the copy to tape at any time.

When the copy to tape is complete, the message "Copy completed successfully" displays.

- 6 Use the [Exit] softkey to return to the Bulk Provisioning menu.
-

Tip

It is good practice to include a printout of the data set details (from Data Set Maintenance) along with the tape.

Section D **Provisioning data into a Meridian Mail Compact Option system**

In this section

<u>Overview</u>	<u>32-38</u>
<u>Before you start</u>	<u>32-39</u>
<u>Provisioning data</u>	<u>32-41</u>
<u>Viewing and printing data conflicts</u>	<u>32-47</u>

Overview

Introduction

This section provides information on provisioning data sets that were copied from one Meridian Mail Compact Option system onto the current Meridian Mail Compact Option system.

Before you start

Introduction

This section provides important information the administrator requires before beginning the provisioning of the bulk provisioning data on the target Meridian Mail Compact Option system.

How the system responds to users during restore

When provisioning of a system is in progress or completes, services that are *in use* continue to use the previous version of the service as well as the previous set of prompts even after provisioning completes. The new services and prompts are available to users if they are first accessed after the provisioning completes.

Potential conflicts between databases

Two types of conflicts, system level or data, may arise when bulk provisioning data from one Meridian Mail Compact Option system to another.



CAUTION

Risk of data loss

Check for system level and data conflicts before proceeding with the bulk provisioning. Failure to do so may result in a loss of data.

System level conflicts

System level conflicts will cause provisioning to fail. To overcome a system level conflict, the administrator may have to restrict the choice of data to be provisioned.

System conflicts that cause provisioning to fail include the following:

- a feature is not installed
- an insufficient number of languages are available
- networking sites are not defined

Data conflicts

Data conflicts do not cause provisioning to fail but they can cause data to be overwritten. If a particular VSDN or service is defined on the bulk provisioning tape and is also defined on the target Meridian Mail Compact Option system, the target system data will be overwritten if provisioning continues. Provisioning can be continued or cancelled if data conflicts exist.

Also, if there are more users on the tape than the target system has room for, temporary users are added up to the system limit only. This may result in some users not being provisioned to the target system.

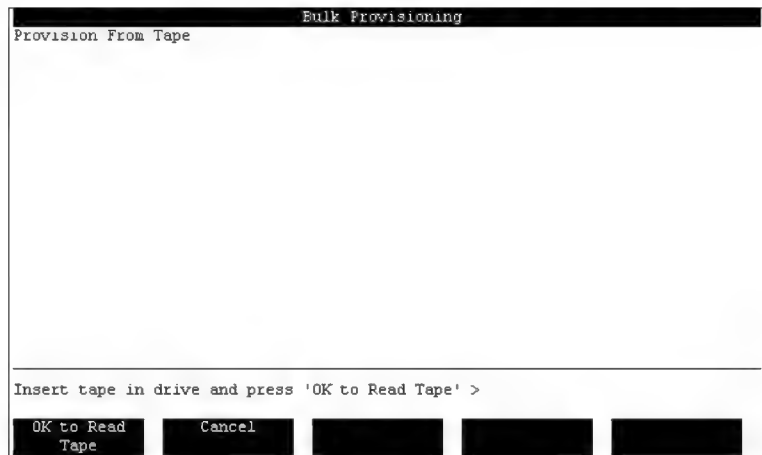
Provisioning data

Introduction

This topic provides information for provisioning the data from the tape to a Meridian Mail Compact Option system. Also included are diagrams of the screens and descriptions of their fields.

The Provision From Tape initial screen

The following is an example of the Provision From Tape initial screen.



Description

The Provision From Tape initial screen contains no input fields. The [OK to Read Tape] softkey retensions the tape and reads summary information while the [Cancel] softkey returns to the bulk provisioning menu. [see “Provisioning data from the bulk provisioning tape” on page 32-45](#) for more information.

The Provision From Tape screen

The following is an example of the Provision From Tape screen after the contents of the tape have been read.

Bulk Provisioning			
Provision From Tape			
Data Set Name:	Service01	Created On: 06/14/96 09:30	
Status:	Provisioning not yet started		
Provision remote users as:	Permanent	Temporary	
Remote Users:	None	All Selected	
Mailbox	Provision	Number of Entries	
ALL	No Yes	10	
Services:	None	All	
ServiceID	Provision	Required Features	
ALL	No Yes	MMUI Fax Forms Menus	
VSDNs:	None	All	
VSDN	Provision	Required Features	
Select a softkey >			
Ok to Start Provisioning	Cancel	View Selected	Print Selected

Field descriptions

The following are the fields in the Provision From Tape screen.

Data Set Name

Description	This is the descriptive label of the data set on the tape.
-------------	--

Created On

Description	The date and time that the tape was created, in the date format of the destination system.
-------------	--

Status

Description	This is the status of the provisioning process.
-------------	---

Provision remote users as

Options	Permanent or Temporary. Temporary users are subject to the nightly audit. For information on temporary users and the nightly audit, see Chapter 9, "Remote voice users".
Default	Temporary

Remote Users

Description	This field appears only if there is user information on the tape and if networking is a feature on the target system.
Options	None, All, or Selected. If the administrator chooses Selected, additional lines display showing the grouping of users as entered in the data set definition. The administrator can then choose the users to be provisioned by using the Yes/No options.
Condition	If the data set was copied to tape by specifying All, then when provisioning from tape the selected option is not available.

Services

Description	This field appears only if there is service data on the tape. The administrator specifies the services to be provisioned from the tape.
Options	None, All, or Selected. If the administrator chooses Selected, additional lines display showing the grouping of services as entered in the data set definition. The administrator can then choose the services to be provisioned by using the Yes/No options.
Default	All.
Condition	If the data set was copied to tape by specifying All, then when provisioning from tape the selected option is not available.

VSDNs

Description	This field appears only if there is VSDN data on the tape. This field is used to specify the voice service DN's that are to be included in the data set.
-------------	--

Options	None, All, or Selected. If the administrator chooses Selected, additional lines display showing the grouping of VSDNs as entered in the data set definition. The administrator can then choose the VSDNs to be provisioned by using the Yes/No options.
Default	All.
Condition	If the data set was copied to tape by specifying All, then when provisioning from tape the selected option is not available.

Provisioning data from the bulk provisioning tape

To restore data from the bulk provisioning tape to the Meridian Mail Compact Option system, follow these steps.

Starting Point: The Bulk Provisioning Menu.

Step Action

- 1 Select Provision from Tape from the menu.
Result: The Provision from Tape initial screen is displayed.
- 2 Insert the tape in the drive and press the [OK to Read Tape] softkey.
Result: The tape begins to retension. Retensioning takes approximately four minutes.
- 3 After retensioning is complete, the system checks the tape for bulk provisioning information.

IF the tape

THEN

is not a valid bulk provisioning tape

you are prompted that the tape is not a bulk provisioning tape. Replace the tape and press the [OK to Read Tape] softkey to continue or the [Cancel] softkey to abort the procedure.

is a valid bulk provisioning tape

the Provision From Tape screen displays.

- 4 View the information on the Provision From Tape screen. Make changes to the Remote Users, Services, and VSDNs fields as necessary. [see "Field descriptions" on page 32-42](#) for information on completing these fields.

Step Action

- 5 Before beginning the provisioning process, view or print the potential conflicts between the data set on the tape and the target system. To view or print data set conflicts, [see "Viewing and printing data conflicts" on page 32-47](#).
Note: If system conflicts exist, [OK to Start Provisioning] will stop. You may wish to restart your choices by using the "Selected" option and toggling Yes to No until the conflicts are resolved.
 - 6 Press the [OK to Start Provisioning] softkey to begin the provision from tape.
Result: The provisioning begins (if there are no conflicts). During the provisioning process, the status of the process displays in the Status field. The only available softkey during provisioning is [Abort]. The [Abort] softkey aborts the provisioning process at the next logical step. When provisioning is complete, the Status field displays the message "Provisioning in progress, 100% done. Tape rewinding."
Caution: If there are data conflicts, you will be informed of this and prompted to cancel or continue. If you continue, you will overwrite existing data. [Cancel] returns to the Provision from Tape screen. [Continue] will start the provisioning and overwrite conflicting items.
 - 7 Press the [Exit] softkey to return to the Bulk Provisioning Main Menu.
Result: The provisioned data is ready to use. If necessary the MMI can be used to make corrections, such as changing a revert DN.
-

Viewing and printing data conflicts

Introduction

This section describes the procedure for viewing and printing data conflicts that may arise during bulk provisioning to another system.

The View Conflicts screen

The following is an example of the View Conflicts screen.

Bulk Provisioning				
View Conflicts				
System Level Conflicts				
Remote Site 333 does not exist.				
Data Conflicts				
Data from tape			Data overwritten on destination	
Class	Type	ID/VSDW/Mbox	Type	Description
Serv	MS	101	MS	Main Menu for Extern
Serv	MS	102	MS	off hours menu
Serv	MS	103	MS	department choice su
Serv	MS	104	MS	Menu 4
Serv	MS	105	MS	Main menu in french
Serv	MS	106	MS	dept choice submenu
Serv	AS	201	AS	Upcoming product rel
Serv	AS	202	AS	Upcoming Events
Serv	AS	203	AS	Security Update
-				
Exit			Next Page	

Field descriptions

These are the fields in the View Conflicts screen.

System Level Conflicts

Description	This field shows all system level conflicts that would prevent bulk provisioning from proceeding. If there are no conflicts the field will display the word None. For more information, see “Potential conflicts between databases” on page 32-39.
-------------	--

**Data Conflicts
or
All Entries**

Description	The appropriate field displays when either the Conflicts Only or the All Entries option is chosen. This field is divided into two parts: Data from tape on the left side, and Data overwritten on destination on the right side of the screen.
-------------	---

Data from tape

Description	When the [Conflicts Only] softkey is pressed, this field shows only the data in conflict with the target system. When the [All Entries] softkey is pressed, this field shows all data that is contained on the provisioning tape for the specified selection criteria.
-------------	---

Description (cont'd)	The information is shown by Class, Type, and ID/VSDN/MBox. - Class is the general class of data on the tape. Class is Serv, VSDN, or User. - Type is the service type represented by the mnemonic used by Voice Service Administration (VSA). This applies to services and VSDNs only. - ID/VSDN/MBox is the voice service ID for a service, the DN for VSDNs, and the mailbox with a network prefix for users.
-------------------------	--

Data overwritten on destination

Description	This field displays any data on the target system that will be overwritten if provisioning proceeds. The data is provided by Type and Description. - Type applies to services and VSDNs only. It is the service type of the service as represented by the mnemonic used by Voice Service Administration (VSA). - Description is the target system's name or the comment field of a data item that will be overwritten. Note: This field will be blank if the data item does not yet exist on the target system.
-------------	--

Viewing data conflicts To view data conflicts before provisioning the data to the new Meridian Mail Compact Option system, use the following steps.

Starting Point: The Provision From Tape screen.

Step Action

- 1
- Press the [View Selected] softkey.
Result: The softkeys are replaced by the [Conflicts Only] and [All Entries] softkeys.

Bulk Provisioning

Provision From Tape

Data Set Name: Service01Created On: 06/14/96 09:30

Status: Provisioning not yet started

Provision remote users as: PermanentTemporary

Remote Users: NoneAll Selected

MailboxALLProvision Number of EntriesNoYes10

Services: NoneAll

ServiceIDALLProvision Required FeaturesNoYesMMUI Fax Forms Menus

VSDNs: NoneAll

VSDNProvision Required Features

Select a softkey >

Conflicts OnlyAll Entries

Step Action

- 2 Use the following table to choose the next step.

IF you want to view	THEN press softkey
the conflicts between the data on the tape and the data on the target system only	[Conflicts Only]
all entries on the tape (for the specified criteria) and the conflicts on the target system	[All Entries]

Result: The View Conflicts screen displays with the appropriate information provided.

- 3 Press the [Exit] softkey to return to the Provision From Tape screen.
-

Printing data conflicts To print data conflicts before provisioning the data to the new Meridian Mail Compact Option system, use the following steps. The printout will go to the reports printer.

Starting Point: The Provision From Tape screen.

Step Action

- 1 Press the [Print Selected] softkey.
Result: The softkeys are replaced by the [Conflicts Only] and [All Entries] softkeys. This is an example of the screen.

Step Action

- 2 Use the following table to choose the next step.

IF you want to print	THEN press softkey
the conflicts between the data on the tape and the data on the target system only	[Conflicts Only]
all entries on the tape (for the specified criteria) and the conflicts on the target system	[All Entries]

Result: The following screen displays.

Bulk Provisioning	
Provision From Tape	
Data Set Name: Service01	Created On: 05/06/96 11:35
Status:	Provisioning not yet started
Provision remote users as:	Permanent Temporary
Remote Users: None All	
Mailbox	Provision Number of Entries
ALL	No Yes 10
Please ensure that the printer is ready._	
Cancel Printing	Continue Printing

- 3 Press the [Continue Printing] softkey to print the conflicts.

Result: The conflict list is printed.

Note: At any time, press the [Cancel Printing] softkey to cancel printing.

Appendix A

Integrated Mailbox Administration

In this appendix

<u>Overview</u>	<u>A-2</u>
<u>Section A: Interaction between IMA and Meridian Mail Compact Option</u>	<u>A-3</u>
<u>Section B: System installation using VMBA</u>	<u>A-17</u>

Overview

Introduction

In [Section A: Interaction between IMA and Meridian Mail Compact Option](#), describes the Integrated Mailbox Administration feature as well as

- the interaction of IMA and Meridian Mail Compact Option with respect to potential conflicts,
- the synchronization of databases
- the implementation and processing differences.

In [Section B: System installation using VMBA](#), the procedures describe the installation of a system

- at a new site with no preconfigured database on either the Option11C Compact or Meridian Mail Compact Option
- at a new site with sets and VMBs preconfigured on the Option11C Compact but nothing configured on Meridian Mail Compact Option
- at an existing site with VMBs configured on Meridian Mail Compact Option but no VMBs configured on the Option11C Compact

Section A **Interaction between IMA and Meridian Mail Compact Option**

In this section

<u>Overview</u>	<u>A-4</u>
<u>What is Integrated Mailbox Administration?</u>	<u>A-5</u>
<u>IMA data translations</u>	<u>A-6</u>
<u>Synchronizing IMA and Meridian Mail Compact Option databases</u>	<u>A-10</u>
<u>IMA and Meridian Mail Compact Option processing differences and implementation issues</u>	<u>A-12</u>

Overview

Introduction

This section describes Integrated Mailbox Administration and discusses the interactions between IMA and Meridian Mail Compact Option.

What is Integrated Mailbox Administration?

Description

Integrated Mailbox Administration (IMA) is a feature of Meridian Mail Compact Option which works in conjunction with the Voice Mailbox Administration (VMBA) feature on the Option11C Compact. These features provide a single point for administration of Option11C Compact sets, Call Party Name Display (CPND), and Meridian Mail Compact Option mailboxes.

Benefits

IMA/VMBA provides significant time savings for both the installer and the administrator. Set datafile (including CPND) and mailboxes only have to be entered once, in one place (LD 10 for analog sets or LD 11 for digital sets), saving time and the potential for datafile inconsistencies between the two systems.

This feature allows the installer or the administrator to add a user and a mailbox from the Option11C Compact terminal by specifying whether or not the user requires voice mail capabilities. If the user requires a mailbox, the Option11C Compact sends a message to Meridian Mail Compact Option to request that the user be added to the Meridian Mail Compact Option database. This eliminates the step of adding the user from Meridian Mail Compact Option.

IMA data translations

Introduction

The Option11C Compact databases contain a subset of the data that are required to completely configure a voice mail user. When a message is sent by the Option11C Compact to Meridian Mail Compact Option to add a user, Meridian Mail Compact Option will use the information with some predefined defaults and rules to add the user to the Meridian Mail Compact Option database.

Example

By definition, the Primary DN is the same as the mailbox number and the same as the Message Waiting Indication DN. The IMA data translations table below shows the data that are sent by the Option11C Compact and the data that are actually stored for each voice mail user.

Before you begin

Before adding users from the Option11C Compact using VMBA, the following steps must be carried out in Meridian Mail Compact Option:

1. Define classes of service for the system.

For more information, [see Chapter 25, "Class of Service administration"](#).

2. For added mailbox security, you can define a password prefix.

For more information, [see "Password prefix" on page 6-146](#).

ATTENTION

If VMBA is enabled, do not modify those parameters which are common to both systems in Meridian Mail Compact Option as this can lead to inconsistencies. The VMBA feature is considered the master and will override these settings. If necessary, you can customize those parameters which appear only in Meridian Mail Compact Option since there is no chance of conflict.

IMA data translations table

Use the following table to determine which parameters are common to both the VMBA and Meridian Mail Compact Option, and which can only be customized through Meridian Mail Compact Option user administration facilities.

Note: Meridian Mail Compact Option requires three fields to collect the last name, first name and initials of the user. In VMBA, CPND Name is the only field required to collect all this information. In X11, this information is in the selectable format First Name, Last Name or Last Name, First Name. Commas must be entered between each element, otherwise Meridian Mail Compact Option will interpret the whole sequence as the last name.

Meridian Mail Compact Option field	Option11C Compact field	What Meridian Mail Compact Option stores
Location Prefix	N/A	Sets to the Local Site ID in Meridian Mail Compact Option
Mailbox Number	DN	Sets to the Primary DN in Meridian Mail Compact Option

Meridian Mail Compact Option field	Option11C Compact field	What Meridian Mail Compact Option stores
Volume ID	N/A	Meridian Mail Compact Option stores users on volume VS1
Class of Service	VMB Class of Service	Value specified from the Option11C Compact.
Last Name	CPND Name	Value specified from the Option11C Compact., or blank if not supplied Note: The CPND must be entered in the one of the following selectable formats: • FirstName Initial,LastName Generational_Qualifier • LastName Generational_Qualifier,FirstName Initial A comma is always required before the last name. The initial is optional and can only be one character. The FirstName and LastName cannot contain spaces, or the characters “+”, “_”, or “?”. Generational_Qualifier is optional, and supports Jr, Jr., Sr, Sr., I, II, III, IV.
First Name		
Initials		
Department	N/A	Blank
Primary DN	DN (DN fills in the Mailbox Number and Primary DN in Meridian Mail Compact Option)	Taken from value entered in the DN field
Secondary DN	Second DN (optional field)	Value specified from the Option11C Compact., or blank if not supplied
Tertiary DN	Third DN (optional field)	Value specified from the Option11C Compact., or blank if not supplied
MWI DN	N/A	Set to the Primary DN in Meridian Mail Compact Option

Meridian Mail Compact Option field	Option11C Compact field	What Meridian Mail Compact Option stores
Personal Verification Recorded	N/A	Set to Not Recorded in Meridian Mail Compact Option. (This field is modifiable from the user's telephone set if the field <i>Personal Verification Changeable by User</i> is set to Yes in the assigned COS.)
Logon Status	N/A	Set to Enabled in Meridian Mail Compact Option
Preferred Language	N/A	Set to the default language
User Password	Not datafilled by the M1	The password will consist of the password prefix (configured in the Voice Security Options screen) and the user's mailbox number.

Synchronizing IMA and Meridian Mail Compact Option databases

Introduction

The Option11C Compact and Meridian Mail Compact Option databases are stored on separate systems; however, they can diverge under the following conditions:

- switch elements of mailboxes are changed with Meridian Mail Compact Option user administration
- the X11 VMBA database is loaded while VMBA is disabled
- the X11 VMBA database is updated while the AML link is down or Meridian Mail Compact Option is out of service

The databases must be synchronized in one of two ways: through automatic or manually invoked audits or through uploading Meridian Mail Compact Option data to the X11 VMBA database.

Audit synchronization

The two databases are synchronized through the use of automatic or manually invoked audits. If a variance is found during an audit, the result depends on whether DATA_CORRECT is enabled or disabled (X11 LD 17). If enabled, the audit will automatically change the data in Meridian Mail Compact Option to conform to the X11 VMBA database. If disabled, the audit will flag variances to the Option11C Compact administration printer, allowing the administrator to determine the appropriate corrective action.

Uploading data from Meridian Mail Compact Option's database to IMA

Another way of synchronizing the two databases is to upload Meridian Mail Compact Option data to the X11 VMBA database.

To eliminate manual entry of all the VMBA fields, an upload of existing mailbox data into the VMBA data fields is available. The upload is initiated from X11 LD 48.

**Reference: to X11
documentation for
more details**

More detailed information, including overlays, are provided in the *X11 Features and Services* (NTP 555-3001-305) in the chapter, “Meridian Mail Compact Option Voice Mailbox Administration.”

IMA and Meridian Mail Compact Option processing differences and implementation issues

Introduction

This section describes a number of feature interactions, name processing differences, and implementation issues that you need to be aware of.

List: Meridian Mail Compact Option features interactions

Make note of the following Meridian Mail Compact Option feature interactions.

- Configured mailboxes will use the default language of the default customer group on Meridian Mail Compact Option.
If the default language is English, all remotely configured mailboxes will be assigned the English language option.
- The IMA feature supports only Local Voice Users.

List: X11 Meridian Mail Compact Option database differences

You should be aware of the following X11 Meridian Mail Compact Option database differences.

- Database audits run every five days.
If mailbox changes are made directly at the Meridian Mail Compact Option administration terminal, they may not be detected and corrected for up to five days.
- The combined first and last name is limited to 27 characters on the Option11C Compact.
Meridian Mail Compact Option supports up to 21 characters for the first name and 41 characters for the last name. This feature overrides these limits to total 27 characters.
- Meridian Mail Compact Option limits first names to 21 characters.
If a first name is configured on the Option11C Compact and is greater than 21 characters, it will be truncated by Meridian Mail Compact Option.
- Meridian Mail Compact Option only supports a subset of the characters supported for names on the Option11C Compact .
Meridian Mail Compact Option does not support the international character set option of X11 (option 211). Meridian Mail Compact Option only supports North American ASCII characters (excluding +, _, and?) in the name fields. If a name that is configured on the Option11C Compact contains characters not supported by Meridian Mail Compact Option, Meridian Mail Compact Option will reject the name.
- Multiple languages on the Option11C Compact are not supported by the IMA feature.
- When entering the CPND name in X11, the first name and last name (the order of names is selectable) must be separated by commas.

If commas are not entered, Meridian Mail Compact Option will interpret the entire sequence of letters as the last name.

- If a mailbox is deleted on the Option11C Compact but not successfully deleted in Meridian Mail Compact Option, an “orphaned” mailbox will result.

These mailboxes will be recovered if the same DN is reused in the Option11C Compact (in other words, Meridian Mail Compact Option will delete the old one and add the new one), but will remain in Meridian Mail Compact Option if they are not.

X11 VMBA and Meridian Mail Compact Option IMA interactions

You should be aware of the following X11 VMBA and Meridian Mail Compact Option interactions:

- Depending on how the VMBA option is set, if a mailbox already exists on Meridian Mail Compact Option and VMBA requests a mailbox to be created for the DN corresponding to that mailbox, IMA will do one of two things:
 - delete the existing mailbox (including its voice messages) and replace it with the mailbox requested by VMBA
 - keep the mailbox messages but configure the mailbox according to the VMBA data elements
- VMBA is the master database.
Changes made using VMB will always be copied to Meridian Mail Compact Option.
- If a DN must be changed on a set on the Option11C Compact, the mailbox will have to be deleted and added again in Meridian Mail Compact Option prior to changing the DN on the Option11C Compact.
- The X11 administrator must set VMBA to off for DN's on the Option11C Compact which should not have mailboxes.

- When making changes to data elements using VMBA, make sure the same mailbox is not open in Meridian Mail Compact Option user administration.

If this happens, the download will stay in pending state until the problem is resolved.

X11 VMB limitations

You should be aware of the following X11 VMB interactions:

- Only one customer can be configured on the Option11C Compact for this application.
- Only 2008 set type is supported in this release.

- The mailbox status that is shown in Overlay 20 in the Option11C Compact indicates the status of the mailbox on the Option11C Compact and not the status of the mailbox on Meridian Mail Compact Option.
For example, if a mailbox is disabled on Meridian Mail Compact Option as a result of a security violation, the state will not be updated in the Option11C Compact.
- Operator revert is not supported because the revert DN is user-changeable.
- Configuration of Meridian Mail Compact Option customer numbers, department numbers and mailbox passwords from the Option11C Compact are not supported in this release.
- Mailboxes cannot be configured for sets served by a remote Meridian Mail Compact Option subsystem.

Section B **System installation using VMBA**

In this section

<u>Overview</u>	<u>A-18</u>
<u>Installing at a new site without a preconfigured database on Meridian Mail Compact Option or the Option11C Compact</u>	<u>A-19</u>
<u>Installing at a new site with sets and VMBs preconfigured on the Option11C Compact but not on Meridian Mail Compact Option</u>	<u>A-21</u>
<u>Installing at an existing site with VMBs preconfigured on Meridian Mail Compact Option but not the Option11C Compact</u>	<u>A-24</u>

Overview

introduction

This section describes the three possible system installation scenarios when using VMBA:

- installation at a new site with no preconfigured database on either the Option11C Compact or Meridian Mail Compact Option
- installation at a new site with sets and VMBs preconfigured on the Option11C Compact but nothing configured on Meridian Mail Compact Option
- installation at an existing site with VMBs configured on Meridian Mail Compact Option but no VMBs configured on the Option11C Compact

Installing at a new site without a preconfigured database on Meridian Mail Compact Option or the Option11C Compact

Introduction

Use this procedure to install a system using VMBA at a new site without a preconfigured Meridian Mail Compact Option or Option11C Compact database.

Procedure

To install a system using VMBA at a new site with no preconfigured database, follow these steps.

Step	Action
------	--------

- | | |
|---|---|
| 1 | Configure and enable the AML link to Meridian Mail Compact Option. |
| 2 | Configure the VMBA application in LD 17 on the VAS associated with Meridian Mail Compact Option. The data correction and automatic audit options for the VMBA application should be set to On to simplify database maintenance and to ensure database integrity.
Result: The VMBA application will be enabled automatically following its configuration in LD 17 if the AML link is currently active. If the Dial link is not active, the VMBA application will be placed in the link out-of-service (LINKOOS) state. |
| 3 | Configure the VMB classes of service on Meridian Mail Compact Option. A transaction error will result if a class of service is specified on the that has not been configured on Meridian Mail Compact Option. For more information, see Chapter 25, "Class of Service administration" . |
| 4 | Installation is complete. VMBs can now be added, changed, and deleted in LD 10 and 11. These changes will be downloaded automatically to Meridian Mail Compact Option if the Dial link and VMBA are enabled. If the Dial link and/or VMBA application is not enabled when doing VMB administration, the VMBs will be left in the UPDATE PENDING state and downloaded when the AML link is enabled. |

**Reference: to X11
documentation for
more details**

More detailed installation procedures, including overlays, are provided in the *X11 Features and Services* (NTP 555-3001-305) in the chapter, “Meridian Mail Voice Mailbox Administration.”

Installing at a new site with sets and VMBs preconfigured on the Option11C Compact but not on Meridian Mail Compact Option

Introduction

Use the following procedures to install a system using VMBA where the VMB database is preconfigured on the Option11C Compact prior to the installation at the customer site (no VMBs should be configured on Meridian Mail Compact Option). The process is divided into two parts:

- preconfiguring the database
- installing the database at the customer site

Preconfiguring the database

To preconfigure the database, follow these steps.

Step	Action
------	--------

- | | |
|---|---|
| 1 | Configure the VMBA application in LD 17 on the VAS associated with Meridian Mail Compact Option. The data correction and automatic audit options for the VMBA application should be set to On to simplify database maintenance and to ensure database integrity. The AML link does not have to be configured at this point since there is no actual hardware to enable. |
| 2 | Configure the sets and associated VMBs. The VMBs will be left in the UPDATE PENDING state. |

Installing the database at the customer site

To install the database at the customer site, follow these steps.

Step Action

- 1 Ensure that the Meridian Mail Compact Option database has been configured with the VMB classes of service that were used when preconfiguring the database. For more information, [see Chapter 25, "Class of Service administration"](#).

ATTENTION

Do not proceed any further until this has been completed.

- 2 Configure and enable the AML link to Meridian Mail Compact Option.
 - 3 The VMBA application should be enabled automatically unless it is in the manually disabled state. If it is disabled, then the VMBA application will have to be enabled in LD 48 using the **ENL VMBA <vsid>** command.

When the VMBA application has been successfully enabled, the preconfigured mailbox data will begin downloading to Meridian Mail Compact Option. The VMBs successfully downloaded and configured can be printed using the PRT VMB option in LD 20.
 - 4 When the download has completed, reported errors should be manually corrected.
 - 5 Initiate the database audit by entering **ENL VMBA <vsid> AUDT ALL** in LD 48. This will verify that the VMB and CPND data on the matches the data on Meridian Mail Compact Option. The status of the audit can be obtained by entering **STAT VMBA <vsid>** or **STAT VMBA <vsid> AUDT** in LD 48.

Result: Errors detected by the audit will be corrected automatically. The installation is complete.
-

Reference: to X11 documentation for more details

More detailed installation procedures, including overlays, are provided in the *X11 Features and Services*

(NTP 555-3001-305) in the chapter, “Meridian Mail Voice Mailbox Administration.”

Installing at an existing site with VMBs preconfigured on Meridian Mail Compact Option but not the Option11C Compact

Introduction

Use this procedure for installing a system using VMBA at an existing site. In most cases, these sites will have the VMBs configured already. The upload command in LD 48 can be used to upload the existing Meridian Mail Compact Option VMB data to the Option11C Compact.

Cleanup may be necessary

This command causes name data configured on Meridian Mail Compact Option to be uploaded; existing names on the switch will be overwritten with the names on Meridian Mail Compact Option. Some name cleanup may be necessary if these names on the switch are not the same as those on Meridian Mail Compact Option. Once this cleanup is complete, name administration becomes easier; it is necessary to change names on the Option11C Compact only (instead of on the switch and on Meridian Mail Compact Option).

Procedure

To install the system at an existing site with VMBs configured on Meridian Mail Compact Option Compact Option but not on the Option11C Compact, follow these steps.

Step Action

- 1 Configure and enable the Dial link to Meridian Mail Compact Option.
- 2 Configure the VMBA application in LD 17 on the VAS associated with Meridian Mail Compact Option. The data correction and automatic audit options for the VMBA application should be set to Off until this installation has been completed.
- 3 The application will be enabled automatically following the configuration of the VMBA application in LD 17 if the Dial link is currently active. If the Dial link is not active, the VMBA application will be placed in the link out-of-service (LINKOOS) state.
- 4 Initiate the database upload by entering **ENL VMBA <vsid> UPLD ALL** in LD 48.
- 5 Periodically check the status of the upload by entering the command **STAT VMBA <vsid>** or **STAT VMBA <vsid> UPLD AUDT** in LD 48.
- 6 When an UPLOAD COMPLETE message is printed, manually resolve any errors that may have occurred during the upload.

Result: The upload is complete.

Step	Action
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- | | |
|---|---|
| 7 | Initiate the database audit by entering ENL VMBA <vsid> AUDT ALL in LD 48. This will verify that the VMB and CPND data on the switch matches the data on Meridian Mail Compact Option. |
| 8 | Manually resolve any errors that may have been uncovered by the audit.
Result: The audit is complete. The Option11C Compact and the Meridian Mail Compact Option databases are synchronized. Perform any cleanup on names, if necessary. |
| 9 | Configure the data correction and automatic audit options as desired. These options are recommended to maintain database integrity.
Result: The installation is complete. Ongoing administration of the VMBs can be performed on the Option11C Compact from now on. |

**Reference: to X11
documentation for
more details**

More detailed installation procedures, including overlays, are provided in the *X11 Features and Services* (NTP 555-3001-305) in the chapter, “Meridian Mail Voice Mailbox Administration.”



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Reader Response Form

Meridian Mail Compact Option
System Administration Guide
555-7001-333

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☐ Learning

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4. What chapters, sections, or procedures did you find hard to understand?

5. What information (if any) was missing from this book?

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Reader Response Form

Meridian Mail Compact Option

System Administration Guide

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